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In Plain English

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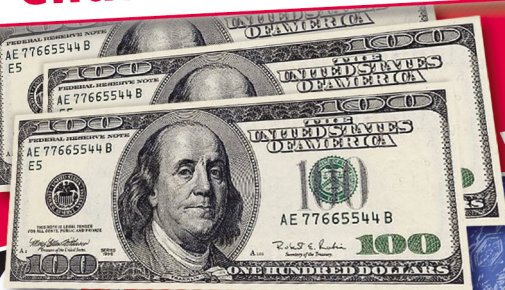


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64GB USB Flash Voyager

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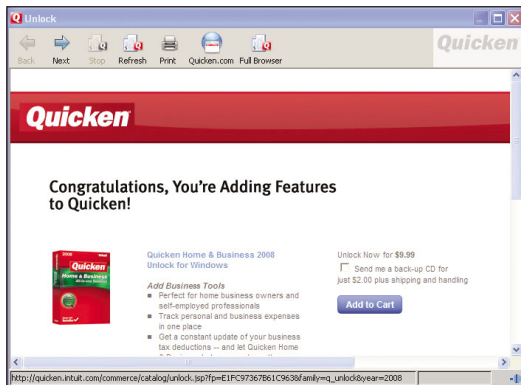
### Quick Studies

#### Email

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### Consumer Electronics

We tell you what you really need to know about various types of consumer electronics products. This month, we cover:

Projectors

Small & Mid-sized Flat-Panel TVs

Wi-Fi Radios



### Editor's Note

With the arrival of the new year, many of us editor-types are tempted to reflect on the highs and lows of the past year or make predictions about the products we'll see in the months ahead.

I certainly wouldn't mind reminiscing about last year's interesting devices, such as recent netbooks (those tiny notebooks that are popping up in airports and cafes across the country) and the latest USB flash drives. (The drives are so exciting because their storage capacities are skyrocketing: Who would have thought, just a few years ago, that you would soon be able to carry 64GB of data on your keychain?)

But I'm sure we'll be seeing much more of these devices in the months ahead. And, flush with digital pictures and home movies from the recent holidays, I'm preoccupied with a completely different question that could be particularly important if I leave it unanswered for too long: Did I really back up?

Just as importantly, did you?

Your external backup drive is softly humming away, presumably storing a copy of the video that you edited last night. But you put the video in a new folder, didn't you? Does the drive know to back up that new folder? If the drive malfunctioned, would it alert you, or would you find out only after your PC crashed?

And what about that receipt you received via email from a recent online purchase? You know, the email that you didn't print because you're pretty sure that the external drive backs up your email?

If you haven't checked to make sure that your backup system is working as you intended, it's worth your time to do so now, while your PC is in good health. So this month, as we show you the latest and most popular backup devices, programs, and services, we also share tips for making sure that those backups are working correctly. After all, that external hard drive isn't worth much if it's not backing up your data.

*Joshua B. Gulick*

Joshua Gulick

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## DESKTOPS &amp; LAPTOPS

# Netbooks Become The New Notebooks

**D**espite the rough economy, certain segments of the computer market are faring well. One of these is the netbook (also known as the ultra-portable or mininotebook), which continues to carve a comfortable niche in the PC market by providing an ideal mix of power and portability. HP's latest entries into this segment should further cement the netbook's status as a viable contender to conventional notebooks.

Following up on the release of its sub-\$500, student-targeted HP 2133 Mini-Note in April 2008, the company has now expanded its HP Mini family with the new HP Mini

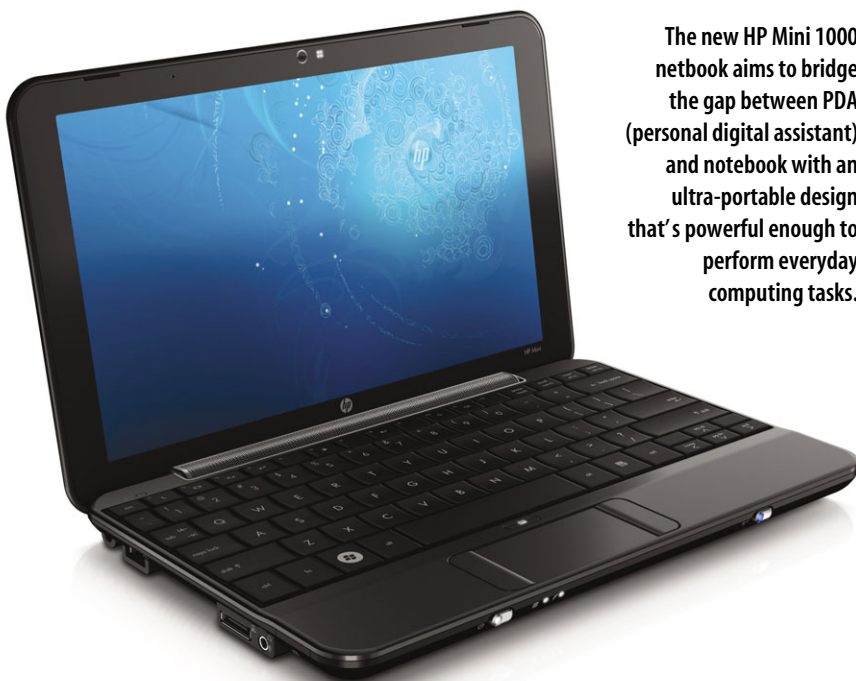
1000 line. Each of the three new netbooks measures less than 1 inch thick, weighs 2.25 pounds, and has a keyboard that is slightly smaller than a standard notebook keyboard. All models also include a built-in Web cam and microphone, along with a BrightView widescreen Infinity display with flush glass, LED (light-emitting diode) backlight, and 1,024 x 600 resolution. Each is powered by an Intel Atom N270 1.6GHz processor.

The HP Mini 1000 (starting at \$399.99; [www.hp.com](http://www.hp.com)) includes Windows XP Home, an 8.9-inch display (a 10.2-inch display is also available), 512MB of DDR2

(double-data rate 2) memory (1GB is also available), 8GB SSD (solid-state drive; 16GB SSD and 60GB, 4,200rpm PATA [Parallel Advanced Technology Attachment] drives are also available), Wireless-G card, 3-cell lithium polymer battery, integrated stereo speakers, two USB ports, a microphone-in port, and Microsoft Works 9.

The HP Mini 1000 with MIE (Mobile Internet Experience) software (starting at \$379) will be available this month and features an HP-developed, dashboard-style interface that's designed to streamline the viewing of digital content such as videos, photos, music, and email. The MIE model is bundled with Internet-focused software for tasks such as instant messaging, email, and online video chat. These applications are preloaded and run from the MIE dashboard to minimize start time, and favorite Web sites that are added to the dashboard stay live.

If you're feeling fancy, a third model is also available. The HP Mini 1000 Vivienne Tam Edition (starting at \$699) features the artwork of designer Vivienne Tam, with a peony flower-inspired design that reflects Tam's Spring 2009 collection. The design was first unveiled on the runway of the designer's fashion show during New York's Fashion Week last September, though according to HP, onlookers mistook the HP Mini 1000 for a purse. ■



**The new HP Mini 1000 netbook aims to bridge the gap between PDA (personal digital assistant) and notebook with an ultra-portable design that's powerful enough to perform everyday computing tasks.**

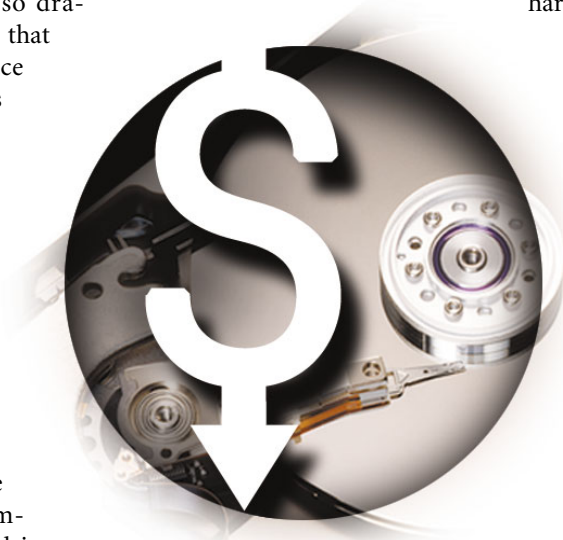


## STORAGE

## Don't Toss That Old Hard Drive

**I**nternal hard drives—both for desktops and laptops—have dropped so dramatically in price in recent years that many consumers regularly replace their drives with beefier models to accommodate their ever-expanding collections of video files, music, and other storage-hungry content.

But that practice can present a challenge: Do you try to sell the old drive for pennies on the dollar or simply discard it? Now, you don't have to do either. Thermaltake has devised a unique solution to using internal hard drives that are no longer installed in your computers. The BlacX SE USB hard drive dock (\$69.99; [www.thermaltakeusa.com](http://www.thermaltakeusa.com)) lets you plug in any 2.5- or 3.5-inch SATA



(Serial Advanced Technology Attachment) hard drive up to 1.5TB (terabytes).

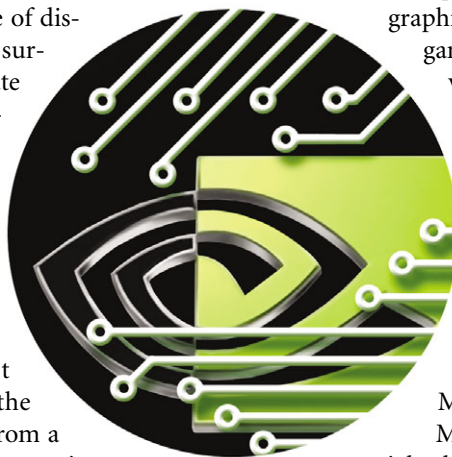
The BlacX accommodates **hot-swapping**, which means you can simply plug in a hard drive to the dock while the dock is connected to your running PC. Although this convenience could prove handy for backups and for accessing files on older drives (though, not too old—the dock supports only SATA drives, after all), the design does expose part of the hard drive, in turn potentially allowing for EMI (electromagnetic interference) issues. Further, drives inserted in the dock are limited to USB 2.0 speeds, but this dock is intended as a supplement to existing internal hard drives. ■

## DISPLAYS

## Integrated Graphics No Longer The Underdog

**H**istorically, integrated graphics—the graphics technology included with motherboards—have paled in comparison to the performance of discrete graphics cards. This comes as little surprise, as cards have plenty more real estate to pack on graphics processors and dedicated graphics memory than do motherboards. But as circuitry continues to shrink, the game is changing, thanks to Nvidia.

“We’ve combined the power of three different chips into one highly compact and efficient GPU,” says Drew Henry, general manager of MCP business at Nvidia. “In doing so, we’ve redefined the level of performance people can expect from a motherboard solution to enrich visual computing experiences for mainstream systems. You can now have the performance of a discrete GPU in a small form-factor PC.”



Nvidia’s new GeForce 9400 and 9300 motherboard GPUs for desktop PCs on the Intel platform use a 16-core graphics architecture that supports DirectX 10 games. These GPUs also enable high-quality video playback with the help of the company’s PureVideo HD (high-definition) technology, which offloads all of the video processing from the CPU to the GPU. Also provided is support for advanced audio and video connectivity, such as uncompressed LPCM (linear pulse code modulation) 7.1 audio, dual-link DVI (Digital Visual Interface), and HDMI (High-Definition Multimedia Interface).

Manufacturers releasing motherboards with these chips include Asus, ECS, Evga, Gigabyte, XFX, MSI, Foxconn, Galaxy, J&W, Onda, and Zotac. ■



## PRINTERS &amp; PERIPHERALS

## BlueTrack Revolutionizes Mouse Tracking

First there was the mouse ball. Then came optical mice with LEDs. Then came lasers. Now we have BlueTrack, a new Microsoft technology that the company claims works better than both optical and laser technologies. But how much different is it from these older technologies?

Microsoft's unique combination of both optical and laser technologies helps BlueTrack mice to track better on more surfaces, according to the company. Microsoft says that BlueTrack will allow people to use mice on carpet, granite, and even rough-grain wood (park bench computing, anyone?).

The light beam that emanates from the bottom of the mouse is more than four times as large as the average laser beam used in today's mice, according to Microsoft. This allows larger images to be captured, in turn providing a better surface reflection. In addition to providing more efficient tracking on varied surfaces, the company says BlueTrack further trumps laser technology because lasers are more sensitive to dust and dirt accumulation.

The Microsoft Explorer Mouse with BlueTrack technology (\$99.95; [www.microsoft.com](http://www.microsoft.com)) features a wireless

snap-in transceiver for easy portability, 30-foot wireless range, blue lighting effects, customizable buttons, and a battery that allows three weeks of use between charges. ■



This Microsoft Explorer Mouse features Microsoft's BlueTrack technology, which blends optical and laser technologies to provide enhanced tracking capabilities on a variety of surfaces.

## CPUs, CHIPS &amp; CARDS

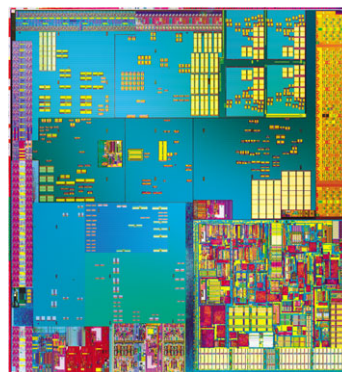
## Intel Readies Do-It-All Mobile Chip

There's no denying the world of computing is growing increasingly mobile-centric. Consumers want devices that are not only portable but that also can perform similarly to desktop and notebook computers. Intel is working to create technologies that can support these heavy demands.

"Technology innovation is the catalyst for new user experiences, industry collaborations, and business models that together will shape the next 40 years," said Anand Chandrasekher, senior vice president and general manager of Intel's Ultra Mobility Group, at the Intel Developer Forum in Taiwan. "As the next billion people connect to and experience the Internet, significant opportunities lie in the power of technology and the development of purpose-built devices that deliver more targeted computing needs and experiences."

One of these technologies is Intel's upcoming "Moorestown" platform, which revolves around an SOC, or system on a chip, that integrates a 45-nanometer processor, graphics, memory controller, and video encoding/decoding technology onto the single chip. Despite all of these features

jammed onto a single device, the chip is slated to be surprisingly power efficient: Chandrasekher says Intel aims to reduce the platform's idle power by more than 10 times compared to first-generation MIDs (mobile Internet devices) based on Intel's Atom processor. ■



An upcoming mobile platform will rely heavily on the SOC (system on a chip) architecture, which includes a processor, graphics, memory controller, and other technologies on one chip.

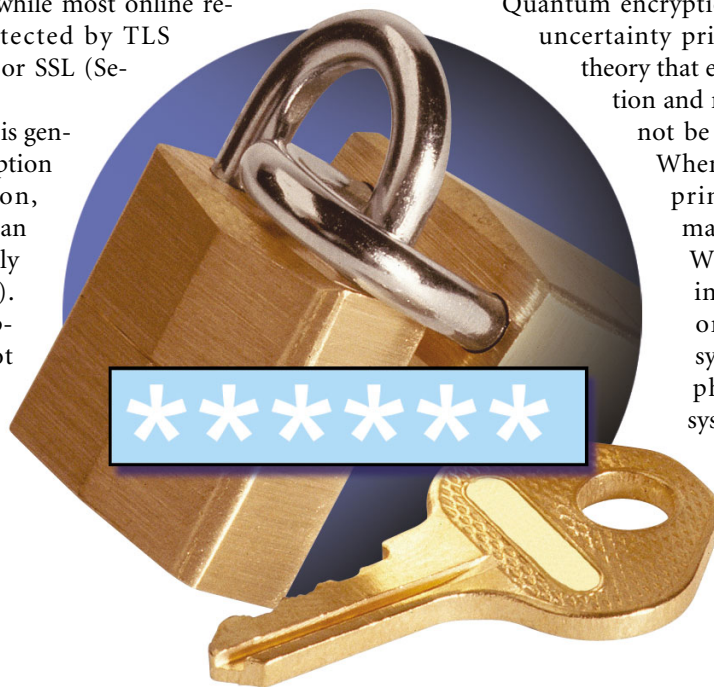
## Encryption Takes A Quantum Leap

Whether or not they realize it, many people rely on encryption to protect their data and personal information every day. For example, home wireless networks often use WEP (Wired Equivalency Privacy) or WPA (Wi-Fi Protected Access) encryption, while most online retail transactions are protected by TLS (Transport Layer Security) or SSL (Secure Sockets Layer).

But while any encryption is generally better than no encryption for protecting information, many encryption methods can be cracked (albeit often only with significant resources). But now, there's an encryption technique that cannot be cracked, according to its creators. At a scientific

conference in Vienna, Austria researchers launched a computer network connected in six locations across the city and in the nearby town of St. Poelten using fiber-optic cables. The network was encrypted using quantum cryptography.

Quantum encryption relies on the Heisenberg uncertainty principle, a quantum-focused theory that essentially states that the position and momentum of a particle cannot be simultaneously determined. When applied to cryptology, the principle works by creating a matched exchange of photons. When someone tried to listen in—or crack—this exchange on the Vienna network, the system detected the scrambled photons and shut down the system. ■



### PROBLEM-SOLVER: TROUBLESHOOTING THE NEWS

**My SATA hard drive occasionally forces my system to reboot when it's accessing data.**

If you've ruled out your RAM as the culprit, try using the drive in another system (if you have one). If the problem repeats in that system, the drive is faulty and needs to be replaced. You can also try using a different SATA port on your motherboard, because the original port could be faulty.

**I installed a new graphics card, and now the system reboots a few times every day.**

If you were using your computer's integrated graphics prior to installing the discrete graphics card, you'll need to disable them. Boot into Safe Mode, open the Device Manager, locate the integrated graphics controller, and select the option to disable it.

**My wireless mouse doesn't work correctly after returning from Standby mode in Windows XP.**

Check your power management features for the mouse. Click Start, select the Control Panel, choose Printers And Other Hardware, and click Mouse to open the Mouse Properties

dialog box. Choose the Hardware tab, select your mouse in the Devices box, and click Properties. Choose the Power Management tab, select Allow This Device To Bring The Computer Out Of Standby, click OK, and then click OK to close Mouse Properties.

**I bought a new heatsink/fan for my CPU. How do I clean the old thermal grease from the CPU?**

Use isopropyl alcohol (preferably 91%) and a cotton ball. Be sure to avoid getting any of the alcohol or grease residue on the plastic portion of the chip. ■



## BlackBerry Prepares To Storm The Smartphone Market

There once was a time when choosing a smartphone was an easy endeavor because only a few models were available. Now, the market is saturated with a massive range of models that differ widely in style and function. Even RIM, which had been the pinnacle of simplicity with just one device—albeit, not a smartphone but a smart pager of sorts—now offers plenty of BlackBerry models.

In August 2008, we reported on the new BlackBerry Bold, the first BlackBerry to support tri-band HSDPA (High-Speed Downlink Packet Access) networks. Now, details have surfaced on RIM's first touchscreen BlackBerry, the Storm. Perhaps most notable about the Storm is that the device resembles an Apple iPhone more than a traditional BlackBerry device.

BlackBerry traditionalists might miss the physical keyboard on the Storm, which opts instead for a light-sensing, 3.2-inch touchscreen with 480 x 360 resolution. A 528MHz processor powers the device, which also includes 1GB of built-in memory (with support for another 16GB of memory using microSD cards).

The Storm isn't quite as business-centric as other BlackBerry models. The device supports a wide range of programs, including entertainment-based software that can be downloaded from



**BlackBerry's new Storm smartphone takes a cue from Apple's iPhone with a full-function touchscreen, but it doesn't stray overly far from RIM's robust email roots.**

a built-in browser. Also included are GPS (global positioning system) navigation; a 3.2-megapixel camera that allows video recording; an organizer; BlackBerry Maps; a media player;

corporate data access; SMS (Short Message Service); and MMS (Multi-media Messaging Service). The phone features voice-activated dialing, conference calling, speakerphone, and voicemail attachment playback. Also provided are access to social networking sites, such as Facebook and MySpace.

Users can sync iTunes music files on their desktops or notebooks with the Storm using the device's BlackBerry Media Sync, while the included Roxio Media Manager lets users create a personal jukebox. Mobile-streaming support provides access to mobile versions of news, television, and other media sites, such as YouTube. As expected with any BlackBerry device, the Storm includes extensive email compatibility, with support for BlackBerry Enterprise Server for Microsoft Exchange, IBM Lotus Domino, and Novell GroupWise, as well as support for existing enterprise and personal email accounts.

The Storm has an approximate talk time of 5.5 hours and 15 days of standby time, and it features password protection, screen lock, and other security features. Although the price and precise release date were unavailable at press time, the Storm was expected to be available from Verizon Wireless by the end of 2008. ■

### DULY QUOTED

**"How can I block email from my manager?"**

—Robert Half Technology surveyed 1,400 chief information officers nationwide and asked for the strangest queries their help desks have received. Other gems include, "Can you reset the Internet for me?" and "My daughter is locked in the bathroom. Can you pick the lock?"

Source: CNN.com

# News From The Help Desk

## Our Most Common Tech Calls

COMPILED BY SETH COLANER

*Each month, we receive numerous technical support calls and email messages. Some computer problems are fairly common, and we find that many callers struggle to resolve the same issues. In this article, we cover some of the most common or timely tech support questions and provide our solution for each of them.*

**Q I have a slow Internet connection, and with all the flash animations on Web sites these days, Web pages often take a very long time to load. How can I block flash animations?**

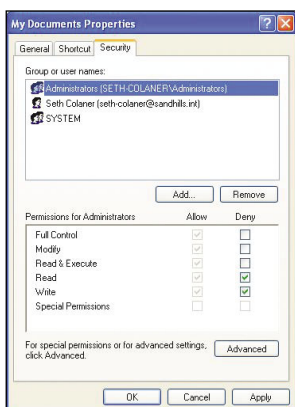
**A** Flash animations are very cool eye candy, but they can certainly slow down your Web browsing, especially if you have a slower Internet connection. There are a couple of different ways you can go about blocking them.

First, you may be able to do so by changing your Web browser's options. In Internet Explorer 7, for example, all you have to do is click Tools, click Internet Options, and click the Advanced tab. Scroll down until you reach the Multimedia section and uncheck the Play Animations In Webpages box. Click Apply, click OK, and restart IE7 for the change to take effect.

You can also download a browser add-on to do the task for you. For example, Flashblock 1.5.6 is an add-on to Mozilla Firefox that blocks flash animations but leaves placeholders so you can click various animations if you decide you want to see them. You can download Flashblock from [flashblock.mozdev.org](http://flashblock.mozdev.org).

**Q How can I add password protection to a file or folder?**

**A** Technically, you can't in Windows, although one thing you can do in Windows XP is compress a file or folder and then password-protect the compressed version. Right-click the item to be compressed, point to Send To, and select Compressed (Zipped) Folder. Double-click the newly created compressed folder. When the



**Setting permissions for files and folders is an easy way to prevent others from accessing your sensitive data.**

window appears, click File and Add A Password. Enter a password for the folder, enter it again to confirm it, and click OK.

Certain applications will also let you add password protection. For example, in Microsoft Word 2007, click the Office button and Save As. Within the Save As dialog box, click the Tools menu and select General Options. Finally, enter a password in the Password To Open or Password To Modify box, click OK, re-enter your password, click OK, and click Save.

If you want to protect files and folders via Windows, you can do the next best thing(s) to password protection: Encrypt some files or set up access permissions. Note that not every option is available on every Windows OS (operating system); for example, encryption of files and folders isn't supported in Windows Vista Starter, Home Basic, and Home Premium.

To encrypt a file or folder, simply right-click it and select Properties. On the General tab, click Advanced, checkmark the Encrypt Contents To Secure Data box, and click OK. Click Apply to make the changes take effect. (You may have to choose whether to encrypt only the file or the file and parent folder and click OK.) This will prevent users logged in under other accounts from accessing this info.

Setting up access permissions is nearly as simple. Follow the same directions as above to reach the Properties window. Click the Security tab and select one of the entries under Group Or User Names. (Click Edit in Vista.) Check any options you want to activate under Deny and click OK. For example, if you have folders you don't want other users to be able to access or change, you can deny the Read or Write options.

**Q I have two computers; one has 512MB of RAM, and one has 1GB of RAM. More RAM means a computer is faster, right?**

**A** That's partially true. The fact is, there are many factors that influence how fast a computer operates, and RAM is one of them.

But there are other components to consider: The processor, graphics card, and hard drive are three main components that affect a computer's performance. A computer with a 3GHz processor will most likely be faster than one with a 2.1GHz processor, for example. A high-end graphics card will outperform a budget card, leading to



better performance. A hard drive that spins at 4,500rpm will be slower than one rated at 10,000rpm.

You must also consider the level of maintenance performed on one computer vs. another; the better-maintained computer may be quicker. Further, different operating systems have different requirements; for example, Microsoft suggests 128MB of RAM is sufficient to run Windows XP but recommends at least 1GB for Windows Vista.

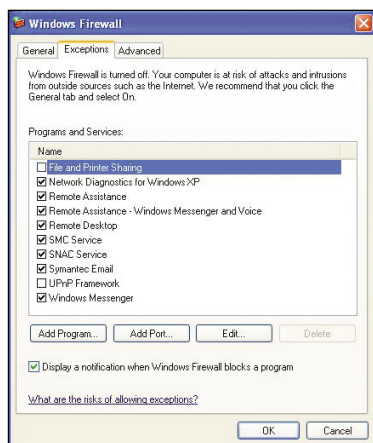
It may make more sense to ask this question: "I have a computer with 512MB of RAM. If I increase the total amount of RAM to 1GB, will my computer run faster?" The answer to *that* question is yes.

**Q** My computer is having trouble booting; it seems to want to boot from something or somewhere other than my hard drive. What can I do to make it boot normally?

**A** Your problem is that the boot order in the BIOS (Basic Input/Output System) needs to be changed. Basically, your computer is currently configured to look at your CD-ROM or floppy drive for bootable media before looking at your hard drive. Having the BIOS configured in this way is necessary when, for example, you're first installing your operating system and the computer needs to boot from the installation CD or DVD.

To change the BIOS settings, reboot your computer and continuously press DELETE (or whatever your motherboard manufacturer suggests—for example, sometimes you need to press F2) until you reach the BIOS screen. (Don't worry, you'll know when you get there!) Note that you most likely will be unable to use your mouse in the BIOS, so all navigation must be done with the keyboard.

Every BIOS is a little different, but you should see something along the lines of Advanced BIOS Features. Move the cursor down to highlight Advanced BIOS Features (or the equivalent) and press ENTER. Move down to First Boot Device and press ENTER. Select Hard Disk, press ENTER, and press F10 to save your changes. When prompted with the Save To CMOS And Exit (Y/N) dialog box, press Y and then ENTER.



**Q** My firewall gives me alerts and messages all the time about this or that program trying to access the Internet. Do I have a virus or what?

When your firewall is on, it mediates access to and from the Internet, but you can make exceptions for certain programs manually.

## Feature Package Topics

Each *Smart Computing* issue includes tips, reviews, and information about a variety of topics. However, each issue also has a featured group of articles about a selected topic. Below is a list of the Feature Packages from the previous year. As a *Smart Computing* subscriber, you have access to all of our archived articles at [www.smartcomputing.com](http://www.smartcomputing.com).

<b>January 2008:</b>	Time For A PC Tune-Up: Improve Speed, Performance & Reliability
<b>February 2008:</b>	Get More Out Of Your PC: Here's What You Can Do!
<b>March 2008:</b>	Solve Common PC Problems: Fix It Yourself Step-By-Step!
<b>April 2008:</b>	The Perfect Home Network: A Step-By-Step Guide
<b>May 2008:</b>	Protect Your PC & Your Privacy: Block Intruders & Malware
<b>June 2008:</b>	Go Wireless: Share Audio, Video & Data Without Cable Clutter
<b>July 2008:</b>	Clean Out Your PC: Preventive Maintenance
<b>August 2008:</b>	Troubleshoot Software: Get Rid Of Glitches
<b>September 2008:</b>	Do It Yourself: Notebook Repair
<b>October 2008:</b>	Boost Your PC's Performance: Optimize Windows & Upgrade Hardware
<b>November 2008:</b>	Reinstall Windows: Breathe New Life Into Your PC
<b>December 2008:</b>	Holiday Gift Guide

**A** Actually, it sounds like your firewall is doing its job; it's blocking programs on your computer from accessing the Internet and also preventing certain programs from accessing your computer via the Internet.

However, there are some programs that you don't want to be blocked. Here's an obvious example: If you block Internet Explorer from accessing the Internet, you won't be able to conduct any Web browsing from that browser. Many firewalls, including Windows Firewall, let you configure the firewall to allow access for certain programs.

Every firewall is going to look a little different, so ultimately you'll have to check your chosen software's instructions, but an explanation of how to change these settings in Windows Firewall is in order.

In Vista, click Start, Control Panel, and Allow A Program Through Windows Firewall. (In WinXP, click Start, Control Panel, Security Center, and Windows Firewall). First, click the General tab and make sure the Firewall is on; if it isn't, click On (Recommended) and click Apply. Click the Exceptions tab and check the box next to any programs you want to let through the firewall. Click OK to close the window. ■

# New & Improved

## Slacker's G2 Brings The Portable Noise

BLAINE FLAMIG

SEND YOUR COMMENTS TO  
BLAINE@SMARTCOMPUTING.COM



G2 (4GB)  
\$199.99

Slacker  
sales@slacker.com  
www.slacker.com

I've been a devoted user of Internet radio station Slacker pretty much since it launched in spring 2007. Slacker licenses its library of 2 million-plus songs from major record labels and publishers and organizes them in 100 channels ranging from Traditional Blues to Broadway Music. You can listen to Slacker's Web-based player anywhere you can get an Internet connection, and unlike some Internet radio stations that rely solely on computer algorithms to select songs for listeners, actual DJs help pick Slacker's songs.

Slacker also lets you create custom stations based on songs and artists you choose. My "Blaine Dial" contains 545 artists. Slacker pulls songs from these and similar artists, and if I love a song that plays, I can tell Slacker to play it more often. If I hate a song, I can ban it. If Slacker plays a song I don't feel like listening to, I can just skip it. All this is free, with the only catch being a few minutes of ads each hour and having a limited number of skips—small compromises for what Slacker gives in return. As much as I use Slacker, one sticking point until recently was that I was tied to a Web browser to listen to songs.

This changed in early 2008 with the Slacker Portable Player, a handheld device similar to an MP3 player. Rather than play my music from my own library, however, the Portable played songs from Slacker stations and refreshed these when connected to a wired or Wi-Fi Internet connection. A great premise for sure, but a few flaws hampered the Portable—namely its blocky size, less-than-friendly interface, and touch-sensitive buttons that weren't so touch-sensitive. To Slacker's credit, it took such criticisms to heart and released the much-improved G2 in September 2008. There are still some lumps to swallow, but the G2 is a stellar option for those worn thin on buying, burning, downloading, and transferring digital music.

Available in 4GB (25 channels; 2,500 songs) and 8GB (40 channels; 4,000 songs) sizes, the G2 retains the Portable's Wi-Fi goodness but is slimmer (about 3.4 x 2.2 inches [HxW]) and lighter (2.6 ounces). Hard, glossy-black plastic and rubber side molding frame the 2.4-inch screen (320 x 240 resolution), and the Portable's touch-sensitive buttons have given way to a scroll wheel and tactile volume, Home, Heart, Ban, Forward, Back, and Play/Pause buttons. Love a song, press the Heart button. Hate it, press Ban. Next time the G2 refreshes stations, Slacker notes these designations in either the Web-based player or a Desktop app you can use to manage stations. Both G2 models also set aside space to store your own MP3, WMA (Windows Media Audio), or AAC (Advanced Audio Coding) music files (1GB for the 4GB G2; 3GB for the 8GB G2).

Also nice is if you already use the free Web-based player, Slacker will preload your G2 with your favorite stations before shipping. Arguably better are the detailed album reviews and artist bios from AllMusic.com that you can read as each song plays. Further, a Premium account (starting at \$7.50 a month) gives you unlimited skips, axes ads, lets you save unlimited songs to custom stations, and saves songs that you can play at any time.

What the G2 omits is a photo/video viewer, FM tuner, custom EQ (10 presets are included), and media card slot to expand memory. Worse, refreshing songs can be painfully slow, especially via Wi-Fi. Wirelessly refreshing stations also drains battery life (rated at up to 15 hours; more like nine hours in my use). Additionally, accessing some Wi-Fi hotspots requires entering a security key using the scroll wheel—a somewhat awkward task. Positively, Slacker has partnered with Devicescape to automate the log-in process for thousands of hotspots, including those in McDonald's and Starbucks locations.

Slacker bundles the G2 with a rubber belt clip, AC charger, USB cable, and noise-cancelling earbuds that are far superior to those most manufacturers bundle. Overall, it's clear Slacker has a lot of room to take its future players. For now, the company is definitely on the right track, as the G2 ably suggests. ■



# Save Gas, Be More Efficient

## GPS Is The Route To Take

JENNIFER JOHNSON

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JENNIFER@SMARTCOMPUTING.COM

**A**lthough gas prices have come down since this summer, they're still pretty high. As a result, many of us are still very conscious about saving gas and taking efficient routes. GPS (global positioning system) devices can help us do just that by avoiding wrong turns. What's more, Garmin's nüvi 755T has the ability to automatically sort multiple destinations and provide an efficient route for errands, deliveries, or sales calls. With the help of a GPS unit such as this, you'll be on the road, taking efficient routes and saving both time and money.



nüvi 755T

\$499.99

Garmin

(800) 800-1020

www.garmin.com

Of course, saving gas isn't the only reason to buy a GPS device. There are a number of other benefits, as well, not the least of which is avoiding getting lost. GPS devices can also help you find a restaurant, hotel, shopping center, or other POI (point of interest). Business and recreation

travelers who frequently visit new areas will attest that POIs are very useful when you're in an unfamiliar city and need a cup of coffee, place to stay, or good bite to eat.

### Garmin's nüvi 755T

Recently, I had a chance to test Garmin's nüvi 755T, a widescreen GPS device that has text-to-speech, lane assist, photo navigation, an integrated traffic receiver, and many entertainment features. This GPS unit supports automobile, bike, and pedestrian modes, so regardless of your method of transportation, it can help you get to your destination.

Text-to-speech is one feature that I'd hate to do without on a GPS device. This feature enables the device to speak the names of streets aloud, so you can keep your eyes on the road. Of course, the nüvi 755T also displays upcoming turn and street information on its vibrant 4.3-inch widescreen, but it's nice to hear the street name, as well, particularly when you're in heavy traffic.

Lane assist is a feature from Garmin that will tell you which lane you need to be in to make an upcoming turn. If you've ever been trapped in the wrong lane on a freeway just before it splits, then you know how helpful it is to know exactly which lane you need to be in. Of course, if you miss the turn for whatever reason, the nüvi 755T will tell you it is recalculating and quickly return a new route.

You can also save favorite locations to the nüvi 755T and enhance them with photos. By digitally attaching a picture of your sister to her address, for example, you can quickly pick out her address among your list of favorites. There are some preloaded photos on the device, but you can also add your own using Garmin Connect ([connect.garmin.com/photos](http://connect.garmin.com/photos)) or via an SD (Secure Digital) card.

The nüvi 755T's integrated FM traffic receiver will help you avoid traffic tie-ups. As long as you're in one of the many cities that offers traffic coverage, the nüvi 755T will alert you to traffic delays and road construction. You can then view details and find a detour.

This device isn't limited to navigation. It also has an MP3 player, audio book player, world clock, currency and unit converter, and calculator, among other features. Using the nüvi 755T's wireless FM transmitter, I was able to listen to MP3s and audio books on my car's stereo while also hearing the device's voice navigation instructions. The nüvi 755T also provides an easy way to carry and show off photos—just pop in an SD card full of pictures and view them in the Picture Viewer.

### Pick A GPS & Start Traveling

Garmin offers four models in the nüvi 705 series. Each model offers similar base features, and higher models have more options, such as hands-free Bluetooth calling, preloaded transatlantic maps, and other features. With the help of a GPS unit such as the nüvi 755T, you'll be on the road, taking efficient routes, and saving both time and gas money. **II**

## Who Needs Blu-ray?

# Toshiba Pushes DVD To The High-Def Brink

MARTY SEMS

SEND YOUR COMMENTS TO  
MARTY@SMARTCOMPUTING.COM

It's been a blue year for Toshiba. The company threw in the towel to end the so-called format wars last March, making the HD DVD (high-definition digital video disc) obsolete overnight. As of press time, the company hasn't jumped on the blue bandwagon with its own BD (Blu-ray Disc) players, which play the "winning" high-def format from its erstwhile rival, Sony.

Instead, Toshiba is still swinging at Blu-ray, just with the other fist. Its new \$149 DVD player can upconvert existing movie collections to HDTV resolutions so well, the company doesn't quite say, that it makes BD irrelevant. The new player is totally unrelated to HD DVD's downfall, wink wink.



**XD-E500**  
**\$149.99**  
**Toshiba**  
**(800) 631-3811**  
**www.tacp.toshiba.com**

### Head-To-Head

The "XDE" in the XD-E500's name stands for "eXtended Detail Enhancement" ([www.toshibaxde.com](http://www.toshibaxde.com)). When it's connected to an HDTV using an HDMI (High-Definition Multimedia Interface) cable, the player can upconvert DVDs to 720p, 1080i, and 1080p resolutions.

In addition, the XD-E500 offers three optional picture modes (only available in 1080 resolution over an HDMI connection). Sharp is self-explanatory, adding definition to object edges. Color boosts blue and green hues. Contrast improves the level of detail in black and dark parts of the picture. The Color and Contrast modes both include Sharp mode.

I preferred the Contrast setting, and that's the mode I used to compare the XD-E500 to an Oppo DV-981HD (\$229; [www.oppodigital.com](http://www.oppodigital.com)). This respected DVD upconverter is based on Faroudja's DCDi (Directional Correlation Deinterlacing) technology.

To compare picture quality, I needed a calibrated HDTV with a quality picture. Enter the Samsung LN-T4681F (\$2,799.99; [www.samsung.com](http://www.samsung.com)), a 46-inch LED-backlit LCD with a gorgeous image (see page 14 of the

June 2008 issue for a look at its 52-inch big brother). A few true 1080i network TV channels supplied the high-def content.

So is the XD-E500 a BD killer? Not really, but it comes as close as I've seen. There's no substitute for more pixels than DVD, which BD delivers (along with DVD upconversion, usually), but the player does supply picture quality that's hard to tell from true HD.

From "Lord of the Rings: Return of the King" to fine details in a calibration disc to the landscapes in a Toshiba demo DVD, the XD-E500 produced noticeably crisper detail than the Oppo. Fabric textures, tiled roofs, etc. looked very close to high-def. You would need true HD video to get any sharper.

Then again, the Toshiba pales next to the Oppo in several ways. It can't automatically letterbox 4:3 full-screen video, so it only plays it in screen-filling stretch mode—a pet peeve of mine. I had to manually adjust the TV's aspect ratio every time I switched between full-screen and widescreen DVDs. Also, the XD-E500 exhibited video artifacts during playback of SVCs (Super Video CDs).

The audio situation was disappointing, too. The Toshiba's analog audio outputs are limited to stereo (2-channel audio) Dolby Digital, albeit with an optional E.A.M. (Enhanced Audio Mode) 3D sound setting. If you want to listen to 5.1-channel surround sound and/or DTS (Digital Theater Systems) soundtracks, you have to hook up a suitable audio receiver to the XD-E500's HDMI or coaxial or optical digital outputs. Finally, the Oppo's more comprehensive settings lets you adjust "lip sync," among other things.

Really, a tie for the Toshiba would have been as good as a win, as it costs \$80 less than the Oppo. The XD-E500's video upconversion technology is great, but minor quibbles keep the player from getting my full endorsement.

### Then Again ...

Should you consider a DVD upconverter? With prices just over \$200, BD players that upconvert DVDs don't cost much more than the XD-E500. Then again, those are low-end players with limited audio format support, average DVD upscaling, and no Bonus View or BD-Live features. While relatively advanced BD players still cost \$399 and up, a good \$149 DVD upconverter makes sense. ■



# Zunes Get An Update

## Share Music & More With The Zune120

TARA SIMMONS

SEND YOUR COMMENTS TO  
TARA@SMARTCOMPUTING.COM



**Zune120**  
\$249.99  
**Microsoft**  
(877) 438-9863  
www.zune.com

Microsoft recently released the Zune16 (a flash drive-based media player) and Zune120 (a larger, hard drive-based player). The newest DAPs (digital audio players) from Microsoft offer more storage space (16GB and 120GB, respectively) than previous versions of the player, but the basic design doesn't differ from the second-generation Zune. With a 3.2-inch screen, a touchpad for navigation, and measurements of 4.3 x 2.4 x 0.5 inches (HxWxD), the Zune120 I recently tested looks much like its predecessor. The only difference is the black (instead of silver) back and glossy front.

The real stories here are the firmware and software updates that coincided with the release of the larger-capacity players. However, these updates don't truly set the third-generation Zune apart, because even owners of first- and second-generation Zunes have access to the updates. While the Zune120 doesn't offer a tantalizing new exterior, the roomy hard drive, capable of holding up to 30,000 songs, is sure to entice audiophiles with ever-expanding media libraries.

Moreover, Microsoft's commitment to supporting even players that are over two years old should be appealing to first-time buyers who want to keep up with the latest technologies years into the future.

### Building On Basics

The 3.0 update to the Zune lets users do more with the features already built into all versions of the player. For instance, with the update, I could mark for purchase some songs I was listening to on the Zune120 via the already-present FM tuner. If a radio station uses technology that broadcasts song info, it will show up on the Zune screen. Press the center of the Zune pad, and that info is sent to the shopping cart. The next time I connected to the Zune Marketplace, I could opt to purchase the marked song.

Thanks to the firmware update, I could even buy these songs over a wireless network. In fact, users can browse the entire Zune Marketplace on the Zune wirelessly. After entering a password to connect to my wireless network, finding and downloading new songs was simple and fast. Further building on the wireless capabilities, users can configure the Zune to sync wirelessly when it's in range of their home network. (The player must be docked or plugged into an outlet to sync automatically; users can perform manual syncs when the Zune isn't docked.)

Other updates range from overdue firmware adjustments (a clock and support for audio books and games) to snazzy software features: The Mixview option available on the Zune software you download to your computer displays a graphical map of related music and Zune profiles. Another graphical element of the software, the Now Playing option, displays artist info and pictures in a borderless window. Picks (Zune's suggestions based on your listening habits) and Channels (related collections available with a Zune Pass subscription) add to the experience.

The basics that made the player popular to begin with remain. For instance, I found the ability to share songs (limited to three plays) wirelessly directly from my Zune with fellow Zune users to be one of the player's most enjoyable features, and Zune Social lets you see what your friends are listening to.

### Not Quite Perfection

There are a few odd issues that the update doesn't address. For instance, while the Zune can play movies, at print time, none were available at the Zune Marketplace. There is a host of TV programs available, and you can get movies from other sources, but it remains a shortcoming. Also, the Zune still doesn't include Microsoft's own Windows PlayForSure compatibility, meaning Zune users can't play some DRM (digital rights management)-protected WMA (Windows Media Audio) or WMV (Windows Media Video) files. But with more DRM-free media becoming available, this may not be an issue for shoppers.

With great visual and audio quality, a history of continual support, a roomy hard drive, and plenty of accessories, the Zune120 is a great choice for anyone who loves music. ■

# Head-To-Head

## Internet Security Suites

Security software firms keep experts on staff, ready to code an update at the first sign of a new virus, worm, botnet, rootkit, or other digital threat. Hence, most of us are willing to pay yearly subscriptions to the companies that keep our PCs safe.

As you may know, it's no longer enough to run a mere antivirus utility, even if it watches out for spyware and adware, too. Everyone needs a third-party firewall, despite the moderate protection afforded by Windows' freebie. And a spam filter does more than just divert junk messages to the trash; it also blocks harmful content from reaching your inbox.

Thus, it's a good idea to install a full security suite instead of a hodgepodge of standalone security programs. Not only can a suite save you money, but its anti-malware components are generally made to work well together without getting in each other's way.

Let's take a look at some attractive options. All of the following have earned reputations as being fairly reliable and effective. Pricing includes a year's worth of free updates and upgrades.

### AVG Internet Security 8.0.196

AVG Free, the free version of AVG Anti-Virus Pro, is a familiar sight on Windows computers around the world. More robust versions start at \$34.99.

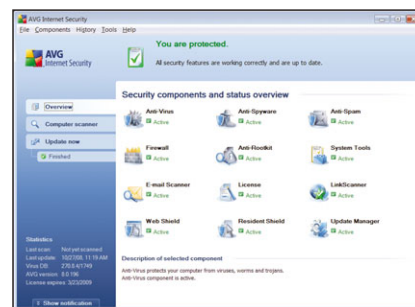
This \$54.99 suite is the top of the heap, giving you a firewall and protection against rootkits, antivirus, and anti-spyware. AVG Internet Security actively guards against malware infestations from the Web, IM (instant messaging) programs, peer-to-peer file-sharing software, your local network, spam, and other avenues. You can schedule regular scans and tell AVG when to update itself with new virus definitions.

AVG Internet Security's special tools give you detailed insight into the processes running on your computer. This includes an editable list of the applications that automatically start up with your PC, along with its network connections, browser add-ons, and more.

AVG's friendly main panel is easy to understand. You get an at-a-glance overview of the types of security features AVG provides, along with color-coded descriptions of their statuses, such as "Active." Double-click any of the icons here, and you'll get a description of what each security feature does, along with a few settings in plain English. You'll find all of the important functions in drop-down menus, too.

One option, enabled by default, is the AVG Security Toolbar. This integrates with your browser (it worked on Firefox 3 and Internet Explorer 7 for us) to warn you about **phishing** attacks (imposter sites), drive-by downloads, and sites known to host malware. When you use a common search engine, such as Google or Yahoo! Search, the Security Toolbar will check the list of results for known threats. You'll see green check mark icons next to sites that are probably safe and red Xs next to URLs that likely lead to pages carrying malware.

Note that AVG is the only suite here that you can only use on one PC at a time (a 3-PC version is \$74.99). Also, some longtime users of AVG have found that version 8 seriously slows down older PCs that could run versions 7 and earlier without a problem. Then again, version 8 does provide AVG's most comprehensive protection yet.



AVG Internet Security 8

### Kaspersky Internet Security 2009 8.0.0.454

Price may be keeping Kaspersky from being as popular in this country as it might be. A three-user download costs \$79.95 per year, and there's no discount for the one-user version on CD.

Certainly, Kaspersky's effectiveness is seldom questioned. Independent testing labs routinely award the software high marks in the fight against malware. Besides the usual viruses and spyware, Kaspersky fights against rootkits, key-loggers, and hacker tools. The company provides updates every hour, something not all antivirus vendors can say.

There's a firewall, antispam capability, IM protection, antiphishing, and parental controls to limit the types of online content particular users can access and the hours they can access the Web. KIS even offers a virtual keyboard you can use if you're worried about a keylogger recording what you type on your physical keyboard. Also included is a privacy scanner tool, which lists areas

### Systems Supported

AVG	Windows 2000	WinXP	Vista
Kaspersky		WinXP	Vista
McAfee	Windows 2000	WinXP	Vista
PC Tools	Windows 2000	WinXP	Vista
Norton		WinXP	Vista
Trend Micro		WinXP	Vista



## BUYING TIPS

- Many suites offer extras beyond genuine security features, such as printer-sharing wizards and Registry cleaners. However, a suite's reputation for effectiveness and low performance impact should count for more than gratuitous goodies.
- Wondering which antivirus utilities work as advertised? Organizations such as Virus Bulletin ([www.virusbtn.com](http://www.virusbtn.com)) assail anti-malware apps with huge libraries of digital beasts and then publish the results.

of personally identifying data you can opt to select and secure with one click.

With small RAM requirements and intelligent work scheduling, Kaspersky is optimized for performance on PCs used to play games. Its fast scanning automatically takes place in the background, and it lets other apps have priority when it comes to CPU cycles.

KIS is highly effective at protecting itself from threats that try to shut down antivirus utilities. It lets you password-protect its settings and operation, too, so attempts to shut it down won't work without the magic word. It even checks the applications installed on your PC for known vulnerabilities. All this with a colorful, intuitive main panel that offers easy access to powerful settings.

### McAfee Internet Security 2009

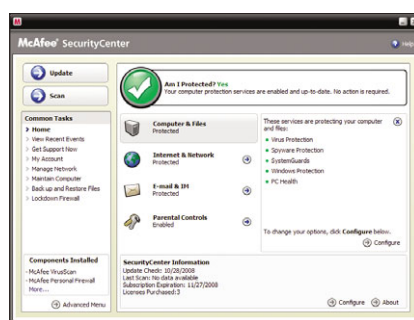
Like Trend Micro and Symantec below, McAfee's stated goal with this latest suite is to speed up threat detection without slowing down your PC. Its \$59.99 license covers three PCs.

You'll get a backup and restore function with this suite. Another feature is McAfee QuickClean, which eliminates junk files, caches, deleted email, and obsolescent Registry entries. There's a file shredder and links to Windows' System Restore and Disk Defragmenter.

McAfee's GUI (graphical user interface) may have fewer icons than other suites, but dig around and you'll find some eye candy. Visual Tracer lets you enter the IP (Internet protocol) address of an unknown computer—perhaps one that tried to contact your own PC—and shows you on a map where it might be located, assuming the IP number hasn't been faked. There are links to color-coded maps of hacker and virus activity, too.



Kaspersky Internet Security 2009



McAfee Internet Security 2009



PC Tools Internet Security 2009

A network manager gives you a simple, clear view of the computers on your LAN, plus their connections to your router, the Internet, and each other. Meanwhile, EasyNetwork helps you set up secure file- and printer-sharing on your network, something most mainstream users will welcome.

Google, MSN, and Yahoo! search engines will benefit from SiteAdvisor,

which works like AVG's Security Toolbar to warn you of dangerous sites. McAfee also offers parental controls over Web sites and keywords, as well as identity and password-protection features.

Of course there are also anti-malware and firewall features plus email, Web-mail, and IM protection. Virus updates don't hog a PC's full attention, either.

### PC Tools Internet Security 2009

A relative newcomer, PC Tools (now part of Symantec) has quickly built a great reputation in the antivirus/anti-spyware field. PC Tools' IntelliGuard components ward off threats old and new, such as rootkits and phishing attacks. Meanwhile, its Browser Defender toolbar rates sites' threat levels and checks for malware, pop-ups, and so on.

This suite includes antispam and firewall features, too. The former gives you very granular control, letting you choose the spam blacklisting services you want to use (if any) and even letting you block email from entire countries. The firewall offers a stealth mode to make no response to unauthorized attempts to communicate with your PC, along with powerful stateful packet inspection for rigorous analysis of each bit of data moving in or out.

An initial scan at installation found some items the competition missed. These were mainly tracking cookies, but one was a cookie linked to a site known to be compromised by malware. Note that to remove any found threats with PC Tools' 15-day free trial, you'll need to register and get an activation code.

### Symantec Norton Internet Security 2009

Symantec is getting its act together. For years, Norton has been the only

name in many users' minds regarding antivirus software, offering effective protection and complete feature sets.

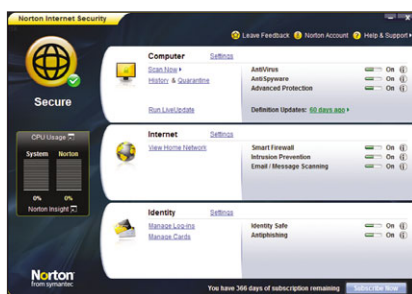
Then again, Norton has long tended to bog down PCs. Updates seem to take forever and sometimes require more than one session. Installation is a hassle. Some Norton products cause frequent errors such as shutdown hangs. Symantec also has had to work to improve how quickly it issues virus definition updates when new threats appear.

With version 2009, Norton's new "60-second" installation is certainly speedier than before. Scanning was similarly fast, beating even the fleet-footed Kaspersky by 10 seconds or so. Norton appeared to take great advantage of all four cores in our test PC's processor during its scan and appropriated less than 10MB of RAM when idle. Even LiveUpdate ran so quickly, we thought at first that it had malfunctioned.

This three-PC suite features a good-looking control panel with well-designed on/off icons. From a network map to ID theft prevention technology, there isn't much the competition has that this version of Norton doesn't—and this year, the list of Norton's "haves" includes performance.

### Trend Micro Internet Security Pro 17.0.1224

There's a \$49.95 version of Trend Micro's Internet Security suite, but we'll look at the \$69.95 Pro edition. Pro has personal ID data protection, PC



Symantec Norton Internet Security 2009



Trend Micro Internet Security Pro 17

speed-up utilities, and enhanced security features for smartphones, email, and IM. The company has pledged to speed up threat identification and reduce its software's impact on PC performance.

Remote File Lock is an encrypted storage area that lets you irreversibly block access to your data over the Web should anyone steal your notebook or PC. The Software History Cleaner can automatically purge your OS, as well as certain browsers, media players, IM clients, and other software, of data that could tell someone the kinds of files and Web sites you've been accessing.

There's Wi-Fi defense for when you set up your laptop in a hotspot, and the Personal Firewall can automatically change its security profile when you move from your home connection to a coffee shop, for example. Unfortunately, the network map, unlike Norton's and McAfee's, didn't notice the other PCs and the router on our LAN. Finally, Trend Micro's First Visitor Protection scans a Web site you have never visited before to make sure that there are no nasty surprises waiting for you in the wings.

Trend Micro found fewer concerns on our PC than some of the other suites here, and it automatically deleted three tracking cookies without asking permission. Still, the company offers month-long trial versions as well as a 30-day money-back guarantee.

### Scanning Speeds

Each suite defines a "full" scan differently, so take these results of our informal scanning speed test with a grain of salt. In order from fastest (15 minutes, 35 seconds) to slowest (44:30) were Norton, Kaspersky, PC Tools, Trend Micro, McAfee, and AVG, all at their default settings.

Whatever the speed, you'll enjoy effective protection of your data with just about any of the above suites. ■

BY MARTY SEMS

## Software Information

	Price/Year	Company	Contact Info	URL	Notable Features
AVG Internet Security 8	\$54.99	AVG	online only	www.avg.com	P2P protection
Kaspersky Internet Security 2009	\$79.95/3 PCs	Kaspersky	(866) 328-5700	www.kaspersky.com	Intrusion prevention tools Virtual keyboard
McAfee Internet Security 2009	\$59.99/3 PCs	McAfee	(866) 736-3971	www.mcafee.com	IP address map lookup Hacker and virus activity maps
PC Tools Internet Security 2009	\$59.95/3 PCs	PC Tools	(800) 764-5783	www.pctools.com	Detailed antispam control
Norton Internet Security 2009	\$69.99/3 PCs	Symantec	(408) 517-8000	www.symantec.com	Multicore processor aware Top speed
Trend Micro Internet Security Pro 17	\$69.95/3 PCs	Trend Micro	(800) 656-5426	us.trendmicro.com	Remote File Lock Software History Cleaner First Visitor Protection

# A Comprehensive Media Suite

## Roxio Creator 2009

\$99.99 | Sonic Solutions  
(866) 280-7694  
www.roxio.com



Roxio's popular multimedia suite has been renamed (it was formerly Roxio Easy Media Creator) and updated with much-needed support for the AVCHD (Advanced Video Codec High Definition) video format. It also has a few nifty new treats in store, especially for devotees of portable music devices and HD (high definition) video. Whether users of older editions will find it worth the upgrade depends upon their needs. Sonic Solutions has an incentive for owners of a wide array of products: They enjoy a \$20 discount when purchasing Creator 2009.

With Creator 2009, you'll go through a fairly lengthy installation process, but that's not surprising given the breadth of this suite. When you open the program, you'll be presented with a well-organized and streamlined (compared to older versions), icon-based interface that we found quite pleasant to use. As with previous versions of the product, the various utilities are still separate modules, but they are better integrated and easier to access and work with than before. Furthermore, a single tab (Home) now affords access to Roxio's six most popular functions without the need to dig into the entire suite.

### What's New, What's Not

Users of previous versions will be pleased to know that CineMagic, Roxio's "quick fix" video creator tool, is still present, as is VideoWave, its more advanced video editor. Both have been tweaked slightly, especially in relation to handling of HD content. Creator 2009 can now let you create and burn up to 60 minutes of HD video to a single-layer DVD. If you want Blu-ray support, you'll have to pay an extra \$29.99. However, if Blu-ray is important to you, consider

purchasing Roxio Creator 2009 Ultimate (\$129.99), with which you'll get the Blu-ray support plus enhanced audio tools and data backup features.

Regarding what's new, a couple of the treats, including Beatmatch (creates smooth transitions but only works well with heavily syncopated music tracks) and Automix (a so-so playlist creator), are more sizzle than steak. However, there are several interesting new features. One that we love, love, love is SyncIt, which offers, in a single operation, drag-and-drop batch conversion of an array of files of varying formats into a different format (for example, portable media player). Other niceties are direct YouTube upload and Audiobook Creator, which converts an entire audio book into one .m4b format (iPhone, iPod, iTunes) file but preserves chapter markers. Fans of audio books will drool over this function.

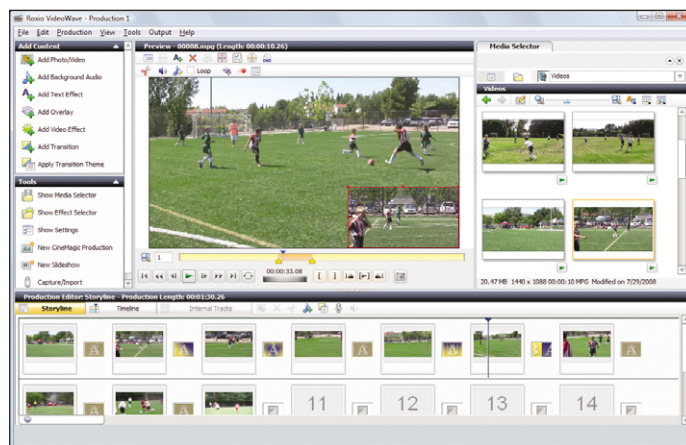
As before, Creator nimbly handles photo management, as well, with tools such as Media Manager that make it easy to keep everything—audio, video,

and digital imagery—neatly arranged. Media burning, ripping, and copying are highly automated and intuitive, and the process works like it should.

### Final Tally

Overall, Creator 2009 is a solid performer, especially for those who are dipping their toes into HD but don't yet have the budget to get into Blu-ray. As with most suites of this genre, none of its components have the power of similar standalone tools. However, those tools also cost far more and are generally not as well-integrated as Roxio's many components. For those who want to manage and edit an array of content from a single, easy-to-use toolbox, it doesn't get much better than Roxio Creator 2009. In support of the suite's launch, Roxio is also extending its educational portal, My Moments (mymoments.roxio.com), with new media resources and tutorials. ■

BY JENNIFER FARWELL



**Key Features:** Broad-based multimedia content creation and management suite offers something for everyone with new support for HD and portable music players.



# Expanded Coverage

## Spyware Doctor With AntiVirus

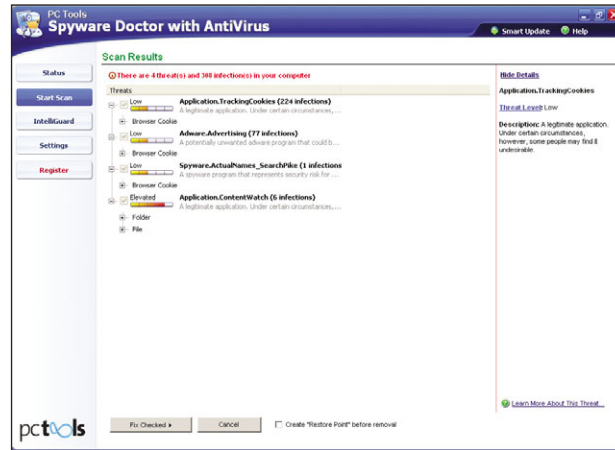
\$39.95 (\$29.95 without AntiVirus) | PC Tools  
(800) 764-5783 | www.pctools.com



For years, Spyware Doctor has been an industry-leading solution for removing spyware (which monitors PC or online behavior and reports it to others). Now, PC Tools has added antivirus protection plus an add-on module, Browser Defender (Internet Explorer and Firefox), that helps protect you from malicious Web sites. A second add-on for badly infected systems is Behavior Guard, a real-time malicious-activity monitor that identifies and stops never-before-seen threats.

Spyware Doctor installs quickly, giving you the option to enable IntelliGuard (the real-time threat-detection tool) and run a system scan. Scans are fast, and results are detailed. Spyware Doctor has also enhanced its ability to scan and remove threats in Safe Mode.

We like the add-on module approach, as it affords control of intrusion man-



**Key Features:** Award-winning spyware detection extends its net to catch viruses, Trojans, worms, and other threats with minimal resource impact.

agement level and consequent resource impact. (Without the add-ons, resource impact was minor but noticeable. This varies with system and Internet speed.) However, we wish the program would inform users during install that these are available. (For Browser Defender, go to

www.browserdefender.com; log in to your PC Tools account at tinyurl.com/ytz26m to add Behavior Guard.) Remove previous installations of Spyware Doctor before adding this one. ■

BY JENNIFER FARWELL

# View Any File

## Bluebeam PDF Revu

Standard  
Edition

\$149 | Bluebeam Software  
(866) 496-2140 | www.bluebeam.com



Positioned in price and functionality between Adobe Acrobat and basic PDF makers, Bluebeam PDF Revu is an excellent, if initially confusing, PDF creation and editing solution.

Installation takes a few minutes but requires no program shutdown. During installation, Bluebeam will change your default PDF reader to PDF Revu. Allow this change, as it is needed to trial the product effectively.

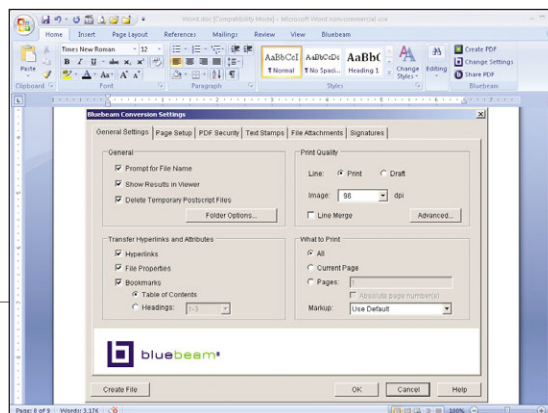
(You can change it back in Bluebeam by clicking Help and Administrator.)

After installation, Bluebeam adds a toolbar option in Word, Excel, and

PowerPoint that lets you create or share PDFs or change document settings, such as security and digital signing, within the Office app. (If you don't see the toolbar, use Bluebeam Administrator to enable the Office plug-in.) Make adjustments, such as compression format and printing resolution, from the document-creation interface.

A minor stumbling block is that the first time you open PDF Revu, the setup dialog box can easily be hidden by other programs. On the plus side, PDF Revu's advanced editing features are impressive, and it offers tutorials to help demystify the process. ■

**Key Features:** Creation of PDF files in Office 2000 to 2007 plus PDF-manipulation features.



BY JENNIFER FARWELL

# Speedy Browsing

## Google Chrome (Beta)

Free | Google  
(650) 253-0000  
www.google.com



Chrome, Google's entry in the browser race, already has a lot going for it, but there are a few surprising omissions, as well. If you choose to give Chrome a try, keep in mind that it's currently in beta. Some users may want to wait for the final version.

It's a speedy download, and Chrome keeps up that fast pace. The install is quick; Chrome immediately imports bookmarks, passwords, and other settings from Mozilla Firefox or Internet Explorer. (The default is whatever browser you're in when you download it, but you can choose otherwise in Customize Settings.)

### User Interface

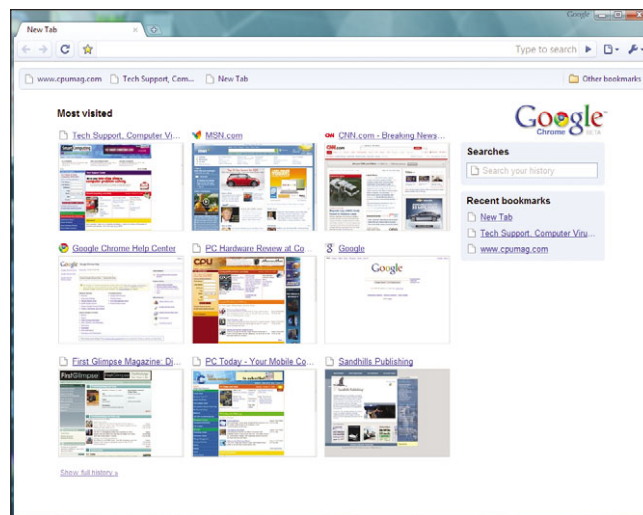
Right off the bat, you'll have some adjusting to do. The user interface is unlike the two browser giants. It's spare and clean, with just a handful of buttons and no menus to be seen. Instead, you're faced with a single bar that operates as both an Address bar and a search box. This "Omnibox" also provides suggestions as you type, based on your history and bookmarks, as well as offering completions based on the most popular sites starting with the same letters.

The other big interface difference involves the tabs. Unlike Firefox and IE, which have the tabs beneath the menus and Address bar, Chrome keeps the tabs on top. Each one contains its own Omnibox, the Bookmarks bar, and a few Toolbar icons. Essentially, each tab acts as a separate browser. This leads to one of Chrome's most nimble features: Tabs can be dragged out to create separate windows, dragged back in to merge, and generally swapped around as necessary.

The immediate drawback is a lack of tab management—Chrome doesn't have a built-in menu where you can see tabs outside the primary window.

Instead, the more tabs you open, the smaller they get to cram them all in.

Once you've been using Chrome for a while, it starts to display thumbnails of your most-visited Web sites on each newly opened tab. Click a thumbnail to launch a site. Other responsive features on the new tabs include Recently Closed Tabs, Recent Bookmarks, and a box for searches. Besides being visually appealing, it's also functional and adds to the speedy convenience of Chrome.



**Key Features:**  
Chrome displays thumbnails of frequently visited Web sites on newly opened tabs. Tabs act as independent browsers.

Adding bookmarks within Chrome is similar to other browsers. As in Firefox, clicking a star icon opens a bookmark dialog box. There you rename and file the link, but there's no tagging feature.

What's really surprising is the lack of support for RSS. With Firefox, a subscription button appears in the Address bar for any page that has a feed. Chrome doesn't have anything like this. Given the popularity of Google Reader, the lack of RSS integration is a real puzzler.

### Performance Plus

As we mentioned, Google seemed to focus on speed with its new browser,

but this isn't the only performance plus. Chrome's underlying design allows each tab to run as its own browser, so that if a bug stalls one tab, the others are unaffected. This is a huge leap forward in performance—how many times have you had multiple tabs open in your browser, only to have them all crash when one gets tied up? With Chrome, you won't be typing CTRL-ALT-DELETE just to release your system.

Another little perk is the Incognito mode, which disables history tracking and doesn't let sites leave any other footprints, such as cookies. The little stealthy spy icon that appears in the top-left corner lets you know you're leaving no traces, which can be helpful when you're doing online shopping on a shared computer.

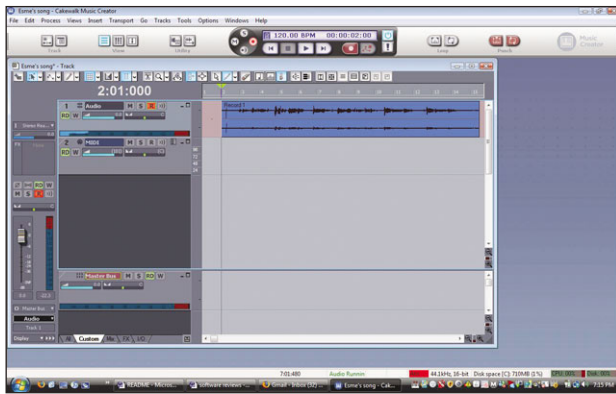
Google knows a little something about the Web, and it shows in Chrome. With a few improvements (particularly RSS integration) and the development of add-ons, Chrome has the makings of a distinctly viable browser. ■

BY ANNE STEYER PHELPS

## Get Creative

## Cakewalk Music Creator 4

\$39.99 | Cakewalk  
(888) 225-3925 | [www.cakewalk.com](http://www.cakewalk.com)

**Key Features:**

The Fretboard helps guitar players new to notation compose, edit, and print music.

sheet music to creating online music players of your songs.

We loaded Music Creator 4 on both Vista and Windows

XP machines with no problems. For music-recording newbies like us, Getting Started was a logical first step. It includes nine detailed tutorials on creating music, as well as all the other help files found in the boxed edition's softcover manual. The software also comes with seven video tutorials to prod you along visually. Despite all this

built-in help, we still had trouble getting started, but we chalk this one up to operator ignorance rather than software glitches—Music Creator is simply not designed for the absolute beginner. You must understand the basics of the recording process and all its associated vocabulary before you can get to the nitty-gritty of recording and editing.

More experienced musicians, however, will find myriad options in each area, from the actual audio input and sophisticated editing to final products. For those who want to share their compositions but are unfamiliar with notation, for example, Music Creator offers alternate ways to transcribe the music, such as the Fretboard for guitar players. At less than \$50, Music Creator is worth experimenting with. ■

BY ANNE STEYER PHELPS

## Open Files With Ease

## Avantstar Quick View Plus 10

\$49 | Avantstar  
(877) 829-7325 | [www.avantstar.com](http://www.avantstar.com)



Avantstar's Quick View Plus 10 lets you view files created in old apps or apps you don't own. Quick View Plus supports more than 300 file formats, from Microsoft Word to Quattro Pro for DOS—it's unlikely you'll find an old file that Quick View Plus can't read.

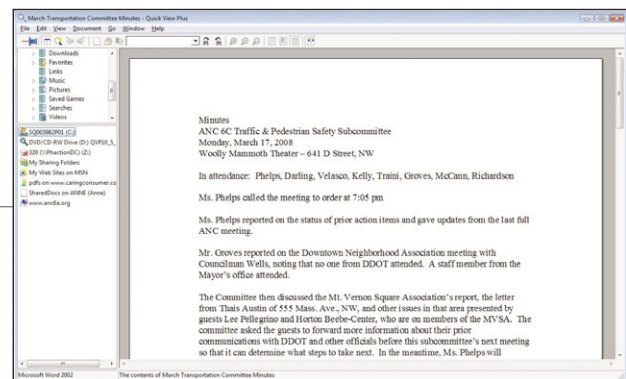
Review files from within the Quick View window, where documents are displayed with original formatting. This is handy for old files, but it's also helpful for day-to-day use. Many people receive email attachments they can't open because they don't own the appropriate app. The convenience of opening documents in a window without loading the entire program you own also makes this a tempting purchase.

Quick View Plus uses a familiar menu system and three windows. The first is a directory to locate the folder; the second shows subfolders and files; and the third displays the selected file. If that file is associated with an installed application, the toolbar displays an icon you can click to open and edit the file.

**Key feature:**  
Quick Print lets you print a file without even viewing it, saving even more time.

Additionally, the Quick Compress and Quick Print tools offer even more functionality. ■

BY ANNE STEYER PHELPS





# Find Solutions Today

Let's face it, there's nothing more frustrating than a computing problem . . . except not knowing where to go to find answers. The next time your computer doesn't boot up or your printer won't print, search the Tech Support Center at SmartComputing.com. Simply click any one of the Top Subject links next to the search box or type in a search of your own. You'll find answers from our Solutions Knowledgebase and Basic Troubleshooting articles, as well as additional results from our general Editorial Archive.

You can also find answers by browsing the Common Problems and Frequently Asked Questions area, which provides easy-to-understand solutions to numerous computing problems.

Simply log on to SmartComputing.com and find the answers you're looking for today.

1. Go to [www.smartcomputing.com](http://www.smartcomputing.com) and click the Tech Support Center link.
2. In the Enter A Subject To Search By box, enter your subject of choice and click Search.
3. Browse articles from various sections including Solutions Knowledgebase, the Q&A Archive, and much, much more.
4. If you can't find an answer to your question, try posting it on our reader-response Q&A Board. (Keep in mind that this feature is available only to paid subscribers.)

Be sure to store all of the helpful articles and information in your Personal Library to keep for future reference. Simply log in and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like to keep your information organized and accessible.



## Mystery Extension

If you can't decipher what kind of file you have on your hands, visit our Tech Support Center for help. Click the List Of File Extensions With Explanations link to get started.



## Get In Touch

Whether you're trying to track down a refund or want some product info, having a company's contact information can be valuable. Visit our updated Manufacturer Tech Support Index to find data for hundreds of companies.

## Install Away

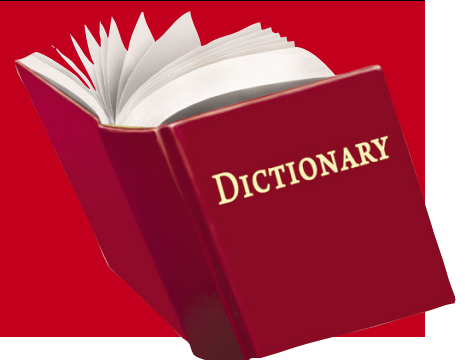
Learn how to install anything from a video card to Office 2007 by visiting the How To Install section of our Tech Support Center.



From Smart Computing's Dictionary

## drop-down list

A standard element of GUIs (graphical user interfaces) in which one option is presented along with a small button, usually represented by a downward-facing arrow. Clicking the arrow with the mouse causes a list of other options to appear below the first. The user then can select from the options by clicking one. The drop-down list then disappears, leaving the selected option displayed in the original box next to the arrow button.





COMPILED BY JOSEPH MORAN

## Microsoft News

### Microsoft, Washington State Sue "Scareware" Sellers

Microsoft and the Washington state attorney general's office have joined forces to file lawsuits against organizations and individuals marketing "scareware," which dupes people into buying software to "fix" nonexistent system or security problems.

Through the use of pop-up windows disguised as legitimate Windows system alerts, scareware purveyors fool consumers into performing phony computer scans, as well as into buying unnecessary or even harmful utilities to address the alleged errors that are found.

"We won't tolerate the use of alarmist warnings or deceptive 'free scans' to trick consumers into buying software to fix a problem that doesn't even exist," said Washington Attorney General Robert McKenna.

Products cited by the lawsuits include Registry Cleaner XP, Antivirus 2009, Malwarecore, WinDefender, WinSpywareProtect, and XPDefender. ■



### Integrated Microsoft Live Search Coming To BlackBerry

Owners of BlackBerry smartphones will soon have easier access to Microsoft Live Search on their devices. As the result of an agreement between Microsoft and device maker RIM (Research In Motion), by the time you read this, BlackBerry users should have the option to use Live Search as their browser's default search engine or access it from [mobile.blackberry.com](http://mobile.blackberry.com). ■



BlackBerry and Windows Live Search give users more on-the-go search capabilities.

Microsoft Live Search

### SearchPerks

Sign up for SearchPerks and start earning tickets towards exciting prizes whenever you search the Web - up to 25 tickets per day. It's free, easy to use, and your tickets accumulate as fast as you can search.\*

And because SearchPerks is brought to you by Microsoft Live Search, you know you won't compromise quality while earning rewards.

Be sure to sign up before the registration deadline on December 31, 2008—the sooner you sign up, the more opportunity you have to earn tickets!

**Get started**

Get 500 bonus tickets just for signing up!

### Search a lot, earn a lot.

Sign up to start earning great perks just for searching!

Five music downloads 525 tickets	Tennis racket and bag 750 tickets	Green t-shirt 1100 tickets
1000 airline miles 1800 tickets	Cook Book 3400 tickets	Game controller 4500 tickets

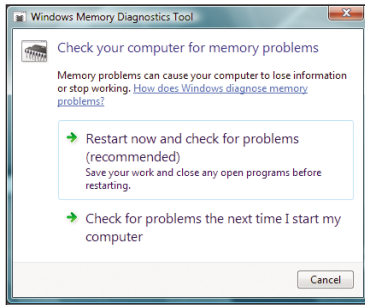
Thanks to Microsoft's new promotion, you can search your way to some fun prizes.

### Microsoft Launches SearchPerks Reward Program

Microsoft is hoping to rustle up more users for Live Search by bribing—er, enticing people with the potential to earn prizes by using the service.

The SearchPerks promotion ([www.getsearchperks.com](http://www.getsearchperks.com)) offers searchers one "ticket" for each Live Search query performed, up to 25 per day. At the end of the promotion (currently scheduled for April 15, 2009), users can redeem accumulated tickets for prizes or donate them to a favorite charity.

Interested participants must enroll by Dec. 31, 2008, be running Windows XP or Vista with Internet Explorer 6 or later, and install a browser add-on to track search activity. ■



The Memory Diagnostic Tool can't operate while Windows is open.

## Find Bad Memory In Vista

Unexpected or chronic system errors can sometimes be caused by faulty RAM. To check your Vista system's memory, you can use the built-in Memory Diagnostics Tool.

To find the Memory Diagnostics Tool, just type **Memory Diagnostics Tool** into the Start Search box and then click the tool. Since the Memory Diagnostics Tool can't check memory

while Windows is running, you'll be given two options—restart the system immediately and run the test, or run it the next time you restart.

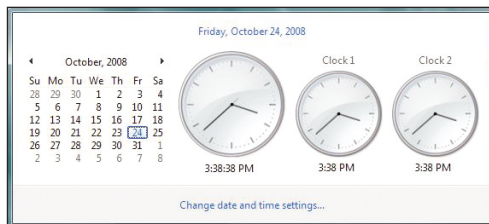
The memory test usually takes around 10 to 15 minutes to complete, and when it's finished, your system will automatically restart and let you know if any problems were found. ■

## Display Multiple Time Zones In Vista

Vista usually displays your local time in the lower-right corner of the Desktop, but it can also be configured to simultaneously display the time for other locations as well. This can be handy if you frequently travel across time zones, or even if you just have friends or family in other time zones and want to be able to tell at a glance what time it is for them (so you don't accidentally call at 3 a.m.).

To set up Vista for multiple clocks, right-click the time, select **Adjust Date/Time**, and then click the **Additional Clocks** tab. Here you can create clocks for one or two extra time zones.

Although Vista will still show only your local time in the System Tray, when you put the mouse cursor over the time display, the additional clocks will appear. Click on the time instead and you'll see actual round clocks. ■



It's simple to configure the clock in Windows Vista to display several time zones.

## Add WinXP Computers To Vista's Network Map

Vista's handy Network Map provides a diagram showing computers on your home network and how they're linked to each other. To view the map, click Start, type **Network And Sharing Center** in the Start Search box, and click the corresponding entry.

Chances are, you don't see any of your WinXP systems on the network map, though, because the feature uses a protocol called LLTD (Link Layer Topology Discovery) that WinXP doesn't understand. Fortunately, there is an update that will add LLTD support to WinXP systems, allowing them to appear on the network map, and it's available to download at [tinyurl.com/6bqldx](http://tinyurl.com/6bqldx). ■

# Windows News

## Windows 7 Gets Official Name

The successor to Windows Vista, heretofore code-named "Windows 7," has been formally named and will be called . . . Windows 7. In a posting on the Windows Vista blog, Microsoft VP Mike Nash said the Windows 7 moniker was chosen for its "simplicity," pointing out that it will be the seventh release of the operating system (according to Microsoft's rather complicated numbering rationale).

The Windows 7 release is tentatively scheduled for late 2009, but Microsoft handed out prebeta versions of it to attendees of its software development and hardware engineering conferences held in October and November. ■

## Windows XP "Downgrade" Availability Extended

Microsoft stopped selling retail copies of Windows XP as of June 30, 2008, but major computer makers including Dell and HP are still allowed to sell interested customers Vista Business or Ultimate systems that have been "downgraded" to WinXP by preinstalling the older OS or including it on a disc.

System makers were scheduled to lose this option as of Jan. 31, but Microsoft has pushed back the deadline again after extending it several times already. System makers will now be able to offer downgraded WinXP systems for six more months, until July 31. ■

## Zune Coming To Windows Mobile?

Ever since the Apple iPod begat the iPhone, there's been speculation that Microsoft would take a similar tack and release a phone-based version of its Zune digital media player, although it has yet to announce any such plans.

But in a recent interview, CEO Steve Ballmer indicated that Zune may indeed be coming to cell phones by way of Windows Mobile, telling an IT magazine, "Now, we built the Zune hardware with the Zune software—and what you'll see more and more over time is that the Zune software will also be ported to and be more important not just with the hardware but on the PC, on Windows Mobile devices, etc." ■





## Windows XP

### Work With Sounds & Audio Devices

Computer audio has come a long way since the old days when a PC's entire sound capabilities were limited to single-tone beeps. Now, the audio adapter (either discrete or integrated with the motherboard) of an average PC is capable of multichannel surround sound that's comparable to that of a home-theater system. Throw in speakers, a microphone, a headset, and other sound devices, and you can imagine that managing all of these components becomes imperative for multimedia PCs. Read on for some sound advice on how to navigate, manipulate, and troubleshoot your PC audio.

The Sounds And Audio Devices window is the key to juggling all aspects of PC audio in Windows XP. Some adapters use their own software for configuring the sound hardware, but we'll cover this in further detail in our "The Audio Adapter Software Alternative" sidebar. For the purposes of the rest of this article, we'll be delving into WinXP's built-in configuration menu.

#### Explore Sounds & Audio Devices

To access the Sounds And Audio Devices window in WinXP, click Start and then click Control Panel. If you're viewing the Control Panel in Category View, click the Sounds, Speech, And Audio Devices icon and then click the Sounds And Audio Devices icon at the bottom of the screen. If you're viewing the Control Panel in Classic View, just double-click the Sounds And Audio Devices icon. The Sounds And Audio Devices Properties window features five tabs that let you access the Volume, Sounds, Audio, Voice, and Hardware aspects of your system.

#### Volume Tab

As you might expect, this tab lets you adjust your system's overall volume. Here you can grab the horizontal slider to raise or lower the PC audio. If you can't hear sound, only move this slider to the right (toward High) slightly past the center point. Moving the slider all the way to the right could damage your speakers or headphones and puts your hearing at risk should the sound suddenly return. Here, too, are

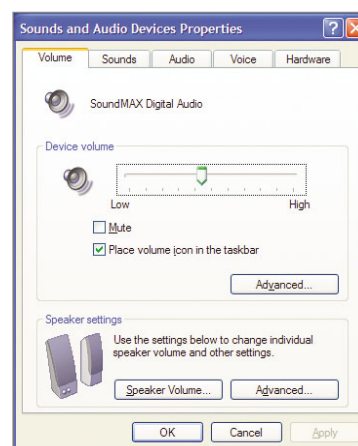
checkboxes that let you mute the PC audio and place a volume icon in the taskbar.

Click the Advanced button to open the Volume Control menu, which features a vertical master volume slider tied to the one on the basic menu, as well as individual vertical sliders for some or all enabled audio devices, such as Wave, SW Synth, CD Player, Microphone, and Line In. Wave refers to any PC audio that's being played with software, such as Internet radio or media player software. SW Synth refers to the software wavetable synthesizer or MIDI (Musical Instrument Digital Interface) audio devices. The Line In slider controls audio from external devices plugged into the (typically blue) Line In port on your motherboard or sound card.

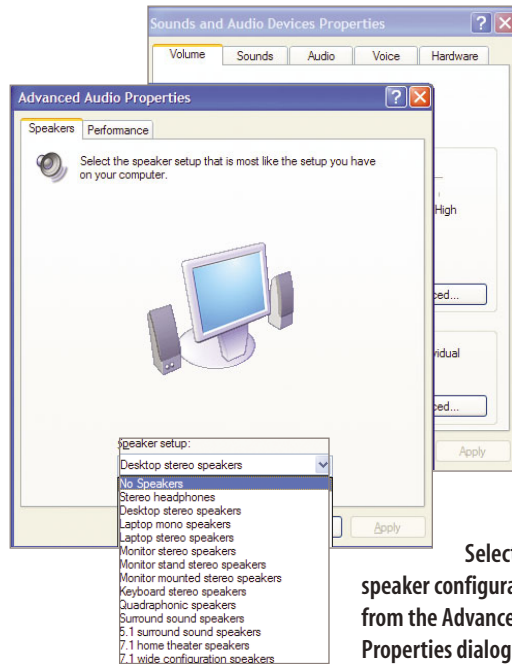
Back on the Volume tab, click the Advanced button under Speaker Settings to display the type of speakers or headphones you're currently using (use the drop-down box on the Speakers tab to make changes). Here your available options can include Stereo Headphones, Desktop Stereo Speakers, Laptop Mono Speakers, and 5.1 Surround Sound Speakers, to name a few. If connecting new headphones or speakers, use this menu to make sure you're getting the audio experience you paid for. You can also adjust the Hardware Acceleration and Sample Rate Conversion Quality settings using the sliders on the Performance tab. Most current PCs can handle Full acceleration and Best sample rate conversion settings.

#### Sounds Tab

This tab gives you access to the Windows Sounds Schemes and the individual program events that you can associate with sounds. Under the Sound Scheme drop-down box, you can choose Windows Default or No Sounds depending on



Tap into your PC's audio system with the Sounds And Audio Devices Properties window.



Select your speaker configuration from the Advanced Audio Properties dialog box.

your preference. Highlight any of the speaker icons in the Program Events box and click the Play icon to play back the sound assigned to that event. To reassign an event sound, highlight the event, choose an existing sound from the drop-down menu, or click the Browse button and then use the Browse dialog box to navigate to a WAV file you'd like to hear for that particular event.

### Audio Tab

You can configure the Sound Playback, Sound Recording, and MIDI Music Playback devices on the Audio tab. Unless you have multiple audio devices installed (for instance, an integrated audio adapter and a discrete audio card), the drop-down boxes for Playback and Recording Device should both be the same. Even if you have multiple devices for playback and recording, it's best to use the same one for both functions.

The MIDI Music Playback section of the Audio tab lets you select the audio hardware that will handle any MIDI devices you have plugged into your system. Again, the Volume button here is redundant. Click the About button to learn more about the Sound Canvas Sample Set and see the currently configured output device (typically your audio adapter).

### Voice Tab

The Voice tab features a similar layout to the Audio tab, but it focuses on the vocal aspect of your PC's sound. For most systems, the default Voice Playback and

Recording device should be your current audio adapter. If you're experiencing trouble hearing sound for gaming, VoIP (Voice over Internet Protocol), and other applications, then make sure your audio adapter appears in the Default Device box and then check the volume by clicking the appropriate button. If the Volume and Advanced buttons seem familiar, that's because they're the same as the Advanced buttons that you saw on the Volume tab.

The Voice tab does have a unique feature that really comes in handy for troubleshooting your audio hardware: the Test Hardware button. Click it to launch the Sound Hardware Test Wizard. Follow the on-screen instructions and click Next to begin the test. After a minute or so, the Microphone Test screen will appear with a live sound meter. Speaking in the direction of the microphone should trigger the volume meter if everything's configured correctly. Click Next to proceed to the Speaker Test, which asks you to speak aloud and look for movement on the Playback meter. Adjusting the Recording and Playback sliders adjusts the recording and speaker volumes, respectively. Click Next and Finish to exit the wizard.

### Hardware Tab

Here you'll find a list of audio devices, drivers, and codecs for your PC. Click the device to highlight it, and you'll see the Manufacturer, Location, and Device Status in the Device Properties section of the tab. Click the Properties button to get additional device-specific details and the all-important Driver's tab, which lets you update, roll back, and uninstall the corresponding driver with the click of a button. The Troubleshoot button launches the Help And Support Center's step-by-step troubleshooter for the highlighted device.

### Music To Your Ears

When you're experiencing audio problems, installing new sound hardware, or just interested in tweaking your auditory experience, turn to WinXP's Sounds And Audio Devices area. Here you'll find everything you need to keep your multimedia PC running in perfect harmony. ■

BY ANDREW LEIBMAN

## The Audio Adapter Software Alternative

Some audio adapters (both integrated and discrete) install applications that perform similar functions as WinXP's Sounds And Audio Devices area. Generally you have the option of tweaking settings in either application,

but oftentimes the third-party software gives you more control over the audio hardware. Some let you add effects, such as surround sound, echo, and reverb. If you don't want any of these effects, then you'll be fine just using WinXP's menus. ■



## Windows Vista

# You've Got Windows Mail

When Microsoft overhauled Windows XP and created Windows Vista, it also renovated the Windows email client. Microsoft scrapped Outlook Express and replaced it with Windows Mail, which offers new features including improved junk mail filters and enhanced search capabilities. Combined, these features make Windows Mail a safer, easier-to-use email program than Outlook Express.

### OE's Extreme Makeover

Windows Mail adopts the same look and feel as other Windows programs, such as Windows Calendar and Photo Gallery. The toolbar is smaller than OE's and has a sleek look to it (fitting with the rest of Vista's interface), making OE's interface look clunky and awkward in comparison.

Windows Mail is similar to Outlook Express in regard to the layout. You will still find the folder menu on the left side,

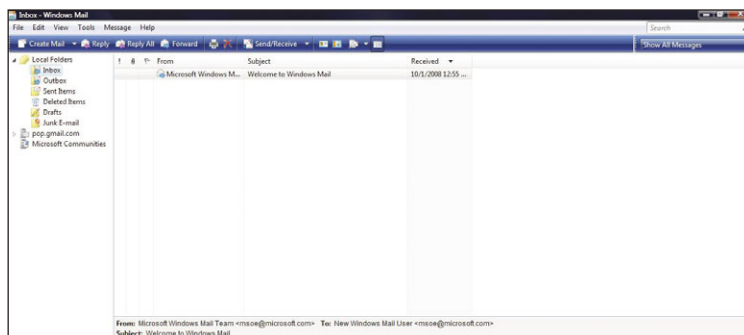
messages on the top, and the reading pane (if you choose to have it) on the bottom. In Windows Mail, however, you will no longer find contacts listed at the bottom-left corner of the screen. Instead there is an icon you click to access Windows Contacts on the top toolbar (but more on that later).

### Find It Faster

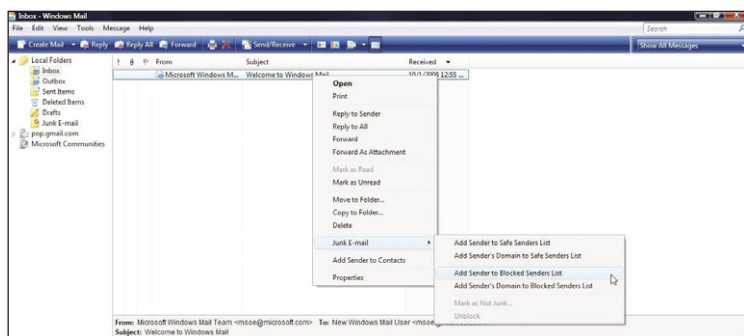
Wading through hundreds—or even thousands—of emails to find one (that you think came about three months ago) can be frustrating. Windows Mail includes Instant Search, which is designed to be a quicker way to search for emails. You can type complete or partial words in the Instant Search text box in the top-right corner of Windows Mail, and it will search through the folder you have selected, scanning your email body texts and headers.

In addition to using Instant Search inside Windows Mail, you can search for emails without opening Windows Mail. In Vista, emails are stored on the hard drive as independent files,

as opposed to storing messages in a large database that makes them more difficult to sift through during the search process. This lets you easily search for emails using Start Search, located in the Start menu. When you type in a keyword (such as a contact's name), the Start Search feature in Vista will pull up emails, as well as any other documents or files associated with the keyword. Additionally, the new storage method helps you manage large saved-email files better than Outlook Express.



The Windows Mail interface has a clean look and is easy to navigate.



You can add a sender to the blocked list without opening the email.

### Safety First

Windows Mail includes new technologies that help block junk mail and harmful emails. Microsoft SmartScreen Technology is designed to “learn” which emails are legitimate and which are harmful. SmartScreen Technology utilizes input from all of the Windows Live Hotmail users who have volunteered to participate in the FBL (Feedback Loop Program) to discover phishing (emails that try to fool people into giving up personal information by imitating a legitimate business) URLs embedded in email messages.

A new feature in Windows Mail (that Outlook Express lacked) is the ability to tag unwanted emails



as Junk Mail. You can even do this with safe emails, such as promotions from an online store where you frequently shop. In case you want to check out the upcoming sales (for example), you can still view Junk Mail because they are not deleted, they are simply sent to the Junk E-mail folder as opposed to your Inbox folder.

If you want to stop receiving emails from a particular sender, you can block an email address. To add a sender to your blocked address list, open the email and click the address listed on the From line so that it is highlighted. Right-click and then select Add Sender To Blocked Senders List. Note that right-clicking also lets you add a sender to your Contacts or Safe Senders list.

### Manage Your People

Windows Mail and Vista collaborate to help you manage your contacts. Rather than only keeping track of contacts in Windows Mail, you have Windows Contacts; a feature you can use outside of Windows Mail. Find Windows Contacts by opening the Start menu and selecting All Programs. It's listed by other Windows programs, such as Windows Calendar and Windows Defender.

While Windows Contacts isn't restricted to Windows Mail, the two programs are compatible. For instance, you can fill in the email address line when composing an email by typing the first part of a name or an email address and then pressing CTRL-K. Windows Mail will fill in the rest of the address for you, or it will give you a list of suggested contacts.

You can access Contacts (as well as Windows Calendar) from the toolbar at the top of Windows Mail, on the same line as other functions, such as Create Mail and Reply. Just click the Contacts icon to pull up your list of contacts.

### A Better Outlook For Email

Windows Mail has enhanced and added a lot of features, and it's a bit easier on the eyes; however, there are still a lot of similarities between Windows Mail and

Outlook Express. You can still use stationery with your messages and organize emails in the same way you did with Outlook Express. So, don't be intimidated by the changes. You will probably find that you can use Windows Mail with the same ease that you used Outlook Express. ■

BY TESSA BRENEMAN

## Be Part Of The Community

**N**ewsgroups (which were also a feature in OE) have returned with Windows Mail and are more useful than ever. With Newsgroups, you can read and post messages about certain topics relating to Microsoft products, such as error messages, or you can pose any questions you

might have. Newsgroups are not just limited to technology and Microsoft, however. You can also discuss common social interests, such as books, or current events. Newsgroups are simply a way of bringing people with common interests and goals together in a single forum for discussion. ■

## Keep Your OE Emails

**J**ust because you are switching from Windows XP to Vista and from Outlook Express to Windows Mail doesn't mean you have to lose all of your email history. If you are simply upgrading your operating system from WinXP to Vista (using the same computer), your emails will automatically be transferred from OE to Windows Mail. If you bought a new machine that runs Vista, you will have to transfer your emails manually.

To begin the transfer, you will first need to view the hidden folder that contains your OE emails on your computer running WinXP. Open the Start menu and then select the Control Panel. Choose Appearance and Themes and then open Folder Options. Select the View tab and then click Show Hidden Files And

Folders located under Hidden Files And Folders. Click OK.

Next, you will need to find the Outlook Express folder. Open your local C: drive, and then select Documents And Settings. Locate the folder with your username, open it, and then choose Local Settings. Then, open the Application Data folder and locate Identities. In the Identities folder, look for the folder with your Windows user identity number, and then open Microsoft. Here you will find the Outlook Express folder.

Copy all of the files located in the Outlook Express folder to the Documents folder of your Vista computer. You can do this by putting the information on a removable storage device (such as a USB drive) or via network if the computers are

both hooked up to the same network.

Once all of the Outlook Express folder items are copied to the Vista Documents folder, open Windows Mail via the Start menu and All Programs. Open the File menu, rest your cursor on Import, and then select Messages. Click to highlight Microsoft Outlook Express 6 and then click Next. Import Mail From An OE6 Store Directory should be selected, but if not, be sure to select it. Click OK. Click the Browse button, locate the OE6 folder, and then click it once to highlight it. Click the Select Folder button and then click Next. To import the folders, choose All Folders or choose Selected Folders to manually pick and choose which message folders you would like to import. Click Next and then Finish. ■

# Digital Television

## What You Need To Know

**L**ast month, we talked about the Feb. 17 deadline for TV stations in the United States to stop broadcasting analog programming, leaving only digital TV on the airwaves (see “The Big Switch” on page 28 of the December 2008 issue). Our tips can help you figure out whether you’ll be affected by the digital switch and what to do about it.

**Who, me?** First of all, the switch only matters to people who watch OTA (over-the-air) broadcast television with an analog TV. If your cable or satellite service supplies all the channels you watch, you don’t need to worry about this.

If your TV already has a DTV (digital TV) tuner, you’re all set. Check its users manual for instructions on tuning in your local digital channels.

If your set was made to tune in only analog channels, not digital ones, you’ll need to buy a digital converter set-top box if you want to continue to watch broadcast stations. You don’t need a converter to watch videotapes or play video games on the TV, however.

If you’re not sure whether your TV set is analog or digital, refer to [www.fcc.gov/cgb/consumerfacts/digitaltv.html](http://www.fcc.gov/cgb/consumerfacts/digitaltv.html). You can continue to use your existing antenna, as long as it can receive UHF signals (channels 14 and above).

**\$40 off.** To defray the cost of new digital TV converters, the National Telecommunications and Information Administration is providing instant rebates. Until March 31, each household can request up to two free \$40 coupons at [www.dtv2009.gov](http://www.dtv2009.gov).

These coupons look and work like gift cards and are usable for 90 days

after they are mailed. Each comes with a list of retailers that stock digital converters, plus specific brands and model numbers covered by the offer.

**Setup.** It’s best to follow your converter’s setup instructions, but here’s a general overview of what to expect.

Hook up your antenna to the Antenna In connector on the digital converter. Next, connect the converter’s TV Out port to the Antenna In jack on your TV. If you have a VCR or other video recorder, connect it between the converter and TV.

Put fresh batteries into the converter’s remote control. Finally, plug in the digital converter’s power cord, and then turn on the TV and converter.

Turn the TV to channel 3 or 4, depending on the position of the channel 3/4 switch on the converter. If the picture is unsatisfactory, change the channel and switch position. If you have a VCR, set it to a different channel (3 or 4) than the converter.

The converter’s setup screen may invite you to choose a language, enter a code to allow the remote to fully control the TV, enable settings such as full-screen or widescreen, and/or initiate an automatic scan of the digital TV channels in your area. If your converter displays signal strength for each channel, you can more easily adjust your antenna for the best reception. Distant digital stations, rather than looking “snowy,” will have blocky, stuttering video.



A digital converter, such as this RCA DTA800, can help your old analog TV and standard UHF antenna continue to receive broadcast stations after Feb. 17.

**What’s on?** Digital TV doesn’t automatically mean high definition, although all high-def channels are digital. Depending on your converter, you may see on-screen program listings in addition to information about each channel.

Digital TV frequencies can carry multiple channels, so the numbers are split, as with channel 6-1, 6-2, and so on. It’s common for a local network affiliate to broadcast a given program as a 480i standard-definition feed on 6-1, a 720p edition on 6-2, and a 1080i feed on 6-3, for example. (480i is the old-style, interlaced TV signal 480 lines tall. 720p is a progressively scanned, high-def format with a 1,280 horizontal x 720 vertical pixel resolution, and 1080i has an interlaced 1,920 x 1,080 picture.)

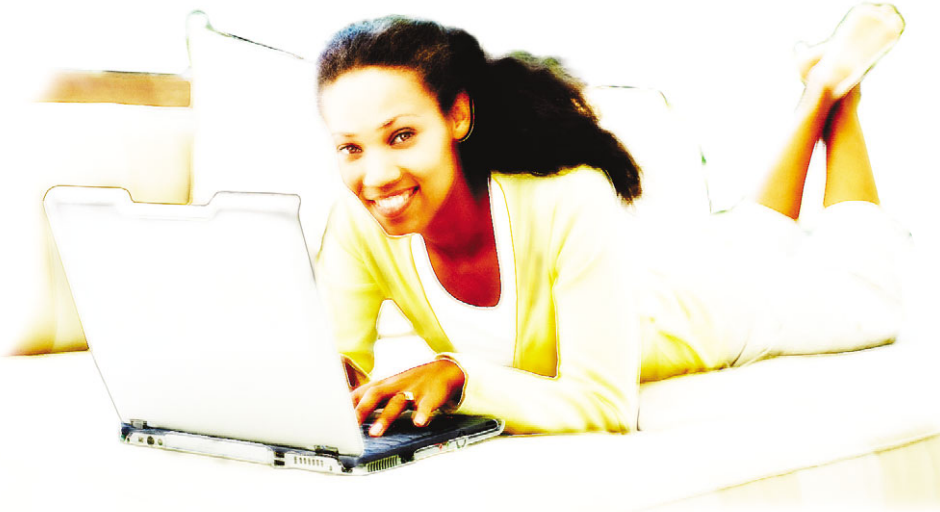
DTV broadcast quality varies. Network programs look pretty good, whereas many local stations simply upscale their 480i content to 720 and/or 1,080 resolutions. Mind you, most TVs that require digital converters use low-quality composite video or coaxial RF (radio frequency) analog inputs, so there’s a limit to how sharp the picture can be.

See? The digital switch is nothing to be afraid of and doesn’t have to be expensive. ■

BY MARTY SEMS

# The New Breed Of Notebooks

## Can They Be Full-Time Companions?



**W**ith notebook sales moving steadily upward and manufacturers touting the features of their new, low-priced models, is it time to ditch your desktop for a notebook? Could a notebook work double duty, both at home and on the road?

The answer for an increasing number of people is yes. For the 2007 holiday season, more than 75% (16 out of 20)

of the top-selling PCs on Amazon.com were notebooks, and although the numbers weren't out as of press time, we predict similar results for the 2008 holiday season. Research firm IDC projects that by 2011, notebooks will enjoy a solid lead, with 66% and 71% of sales in the corporate and consumer worlds, respectively.

However, as most of our parents drilled into us as children, just because everyone else is jumping off a bridge doesn't necessarily mean we should do so.

### Considerations

If your desire to own a notebook is fueled by envy of cool-looking people tapping happily away outside your local coffee shop, think long and clearly about the decision. If you rarely travel or don't find yourself pining for PC mobility when you do travel, a notebook-as-desktop solution

may not be for you. This is especially true if you already have a smartphone with Internet access and other productivity enhancements.

However, if one of the following scenarios fits you, you are a prime candidate for a notebook-as-desktop replacement.

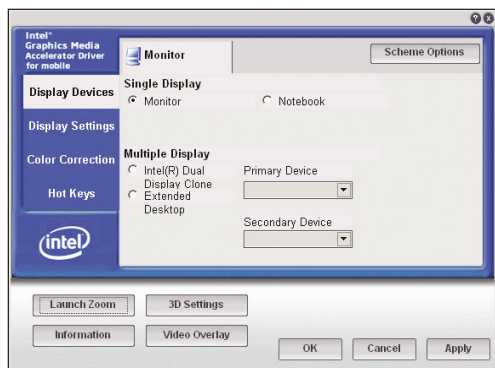
- You currently own both a notebook and desktop, and one of them needs upgrading.
- You are considering purchasing a notebook for the first time.
- When traveling, you frequently head to a library, business center, or other public PC to check email or perform key tasks.
- You have or are implementing a wireless network in your home and don't already own a notebook.

With a notebook as a primary PC, you won't spend hours copying files you need on the road from the desktop to a notebook or external, portable drive. You will never discover after you leave that you forgot to bring key information. Finally, you won't return home with duplicate data sets you must resolve.

Furthermore, if you live in a hazard-prone area such as the Gulf or Atlantic coasts or Tornado Alley, a notebook is a particularly sensible choice as your main PC. Admittedly, when disaster threatens, grabbing an external drive is as easy as unhooking a notebook. However, if you lose touch with loved ones, an external drive won't let you surf the Internet for news or send email messages.

### How It Works

Notebooks can provide an identical experience to that of a desktop, including support for a big-screen monitor, standard keyboard, mouse, printer, scanner, and more. You can attach one or more external hard drives to a notebook, as well, and some notebooks have multimedia ports that output to your video or audio equipment. Furthermore, virtually all notebooks



Your notebook should offer the option to either use an external monitor only or to extend or replicate the Desktop across both monitors.



today have Wi-Fi chips (and some have built-in cellular broadband chips), as well as Ethernet and USB ports, making them network-ready.

Many manufacturers make docking stations and port replicators, which enable you to plug your peripherals (external monitor, printer, drives, etc.) into a stationary base that you can leave behind when you take the notebook on the road (docking stations generally offer more or different options than port replicators). Using one of these turns a 10-minute process into a 30-second treat and ensures you'll be untangling fewer wires when you return. If you are purchasing new peripherals along with your PC, consider wireless hardware that can connect with your notebook via Wi-Fi, Infrared, or Bluetooth. Make sure your notebook supports Infrared or Bluetooth if you take this approach. Unlike Wi-Fi, these two wireless technologies are far from ubiquitous in notebooks. (You can achieve add-on Bluetooth functionality with a USB adapter.)

When you use your notebook with an external monitor, you'll probably have three choices: use the external monitor without the notebook's display, extend the Desktop across both, or replicate the Desktop on both. (Right-click your Desktop and look for a Graphics Properties or similar option to locate this feature.) Replication may sound pointless, but it can enable two people to watch the same DVD or review the same document from a few feet apart. With the new Wi-Fi monitors being released, dual view will become possible at a much greater range.

If you use an external monitor, as well as an external keyboard and mouse, you may be able to close your notebook while in use to prevent dust intrusion. Before you take this step, make sure your notebook doesn't vent heat through the keyboard (many no longer do) and adjust your power settings so that closing the lid doesn't send the notebook into Sleep mode when you are running your laptop on AC

power (your power adapter). To access the power settings in Windows Vista, click Start, Control Panel, Hardware And Sound, and Power Options.

Finally, when you are at home, run your notebook on AC power as much as possible. Each charge and discharge cycle on your notebook's battery pack erodes the life of the lithium batteries somewhat, so running on AC power when practical maximizes overall battery life. In fact, if you leave your notebook plugged in for long periods of time, consider removing the battery pack and running on AC power only. Leaving the battery in place offers the



**The Alienware Area-51 m15x will give hard-core power buffs a lot of juice starting at under \$1,500.**

distinct advantage of giving you automatic battery backup in case of a power failure. However, over time it will reduce the life of your notebook's batteries (although not as much as does charging and discharging them).

### What's Not To Love?

Depending on your needs and budget, some considerations may steer you away from notebooks. In recent years, they have become much more powerful and less expensive. Nevertheless, they are still more expensive than their equivalent PC counterparts, especially in the upper-performance ranges. If you are a game

or video fanatic, a notebook that will slake your thirst for speed and power will cost considerably more than a desktop equivalent.

For example, Alienware's Area-51 m17x notebook ([www.alienware.com](http://www.alienware.com)) is a monster gaming machine with an equally monster price: It starts at \$3,899. For that stratospheric sum, you gain a top-of-the-line Nvidia GeForce graphics card with a dual GPU configuration, up to 1GB of dedicated (for graphics) memory, an Intel Core 2 Extreme processor, a 17-inch wide-screen display, and up to 1TB (terabyte) of storage in a RAID 0 configuration. (RAID stands for **redundant array of independent disks**; it's basically several hard drives rolled into one package. A RAID 0 configuration uses multiple disks to increase speed and capacity, but not for backup purposes.)

A notebook such as this is a superior performer, not only for gaming but also for HD (high-definition) video editing, 3D rendering, and any graphics- and processor-intensive tasks. In average operation, it will be a speed demon. The bad news for notebook buyers? Alienware's similarly equipped desktops start in the \$1,200 to \$1,400 range.

With that said, if the description above left you reeling, or you are not a serious gamer or video editor (or a professional graphic designer or drafter), you don't need this much muscle. At the lower end of the spectrum (discussed in the "What's Available" sidebar), the price differential between notebooks and desktops is considerably less.

Another issue with notebooks is interior access. These enclosed systems generally cost more to have repaired or upgraded than their desktop counterparts. Space is at a premium in these babies, so parts are smaller and may be configured in such a way that getting to certain components requires more disassembly. Furthermore, on some of these models, if the monitor goes out you might as well replace the whole notebook. Fortunately, this is less of a

problem than in previous years—notebook repair and monitor replacement is easier and less expensive now than ever. (Regarding monitors, also remember that upgrading the built-in monitor to a larger size will not be possible.)

Oddly enough, a final important downside to using a notebook as your primary PC can be weight. Although some of today's notebooks weigh less than 2 pounds, a few of the most

full-featured ones now weigh more than 20 pounds. If you want so many bells and whistles that the model you love compares to a concrete block, you might as well stick with a desktop.

This does not mean you cannot find a great notebook that is light enough for travel. At a reasonable price (well under \$1,000), you can buy a mid-weight model (6 to 10 pounds) that is plenty powerful enough for home use. It may also have better battery life than

some lighter-weight models (batteries are heavy, and performance eats batteries quickly.) That's one of the reasons business-centric, presentation-optimized models are often the heaviest units—they need great performance for a long period of time.

## Final Notes

Notebooks as primary PCs aren't for everyone, but we have spoken with numerous users who love them. Many report that once they switched to a notebook-only solution, they found themselves taking their PC on the go more frequently, enhancing recreation options and enabling greater work productivity. On the other hand, if you believe electronics have insinuated themselves too heavily into our lives, you'll probably hate the idea. A notebook as a desktop can streamline your life or add another ball and chain; it's all in your perspective. ■

BY JENNIFER FARWELL

For under \$800, the Sony VAIO VGN-NS140E/W is a versatile performer for home or on the road.



## What's Available

With the new breed of low-priced notebooks that debuted last year, you can now purchase a pretty powerful machine for under \$700. It won't be one of those ultra-slim, feather-weight stunners, but that's not what you need for a desktop, right? (If you travel frequently and truly need an ultra-portable model, prepare to shell out some extra bucks if it will double as a desktop computer. However, remember that by purchasing only one machine, you're saving money.)

There are too many sub-\$1,000 (and even sub-\$500) notebooks to mention here; browse the Internet, and you'll be surprised by the many

choices. One we like is the Sony VAIO VGN-NS140E/W ([www.sonymstyle.com](http://www.sonymstyle.com)), which was debuting at press time. For a list price of \$799.99 (less through resellers), you'll enjoy a 2GHz Intel Core 2 Duo; 64-bit processor; 3GB of installed memory; a 250GB, 5,400rpm hard drive; a 15.4-inch wide-screen monitor; built-in Wi-Fi (802.11n); Web cam; DVD drive; Windows Vista Home Premium; and more. Weight runs from 6.4 to 9.9 pounds, depending on the options you select.

For the speed and power mongers we discussed earlier, Alienware offers a 15.4-inch version of its Area-51 series machines, the m15x, that starts at \$1,499 (the Premier

Edition starts at \$2,299). Widely recognized as the world's fastest 15.4-inch notebook, this machine is a work horse, with a "Smart Bay" (lets you swap your optical drive for a second removable drive or battery) and many of the treats in the aforementioned m17x.

No matter which model you choose, there are several things to keep in mind. First, notebooks tend to have slower hard drives than desktops; the faster the revolutions per minute, the better (5,400rpm is OK; 7,200rpm is great). If you are concerned with battery life, look for SATA (Serial Advanced Technology Architecture) drives, which are fast and efficient.

Second, memory doesn't consume energy or radiate heat, so if you are using your notebook for both home and travel use, purchasing more memory can make up for less-than-great processor speed.

Third, notebooks can have all the ports and extras of desktops and sometimes more. If you need a memory card reader, FireWire, a great video camera, or powerful speakers, keep looking until you find the right notebook for your needs.

Finally, unless you really need a large display on the road, choosing a smaller one will reduce notebook size and weight. ■

## DIY Project

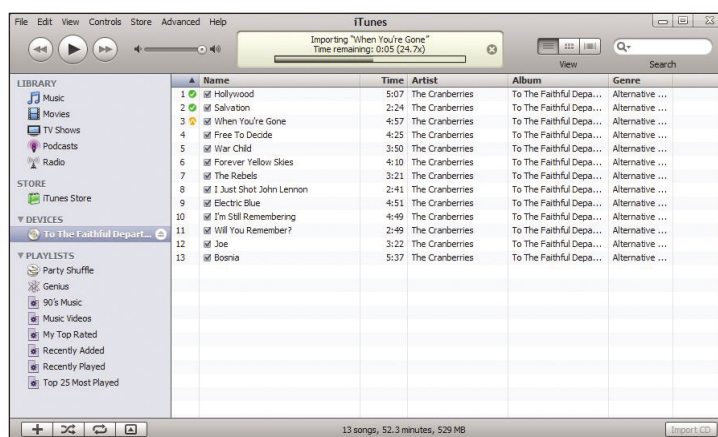
# Rip Songs From Your Music CDs

**B**ack before the PC morphed from a geek doodad into an entertainment hub for the whole family, music was as far removed from the PC as those geeks were from a vibrant social life. But with the dawn of the digital age, the PC became a powerful audio storage, sorting, and—much to the chagrin of the music labels—sharing tool. Fast-forward to today, and even the “big four” (Sony Music Entertainment, EMI, Universal, and Warner) have been forced to reckon with the dramatic shift from physical to digital formats.

Whether or not you’ve begun purchasing digital music, now’s a great time to **rip**, or convert, your entire CD collection into digital formats. To start enjoying the benefits of your own digital music library, just open your favorite media player software (iTunes, Windows Media Player, and Winamp are covered here) and follow along.

### Import With iTunes

Apple’s media player has become almost synonymous with digital music thanks to the unwavering popularity of the firm’s iPod portable media players and the fact that the online iTunes Store handles 85% of the world’s digital music sales. To see Apple’s tutorial for ripping (importing) your music from a CD, click Help from the top of the iTunes interface and then click iTunes Help. Next, click The iTunes Jukebox from the right pane of the iTunes Help window and then click the Importing Songs From CDs link. You can also view a video tutorial by directing your Internet browser to [www.apple.com/itunes/tutorials](http://www.apple.com/itunes/tutorials) and clicking Import Music From CDs from the list of



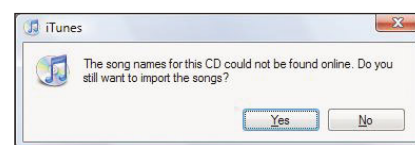
Importing songs into iTunes is a snap.

Featured Tutorials. Read on for our expanded how-to based on iTunes 8, which was available from [www.apple.com/itunes](http://www.apple.com/itunes) as we went to press.

If iTunes is your default player, importing a CD is simple. Load an audio CD into the optical drive, wait for the iTunes pop-up, and click Import. If the pop-up didn’t appear, launch iTunes and wait for the full list of tracks to appear (song titles will appear if you’re connected to the Internet). Click the Import CD button in the lower-right corner of the iTunes interface to begin importing the audio files. If you don’t want to import all songs from a CD, simply deselect the checkboxes beside the songs you don’t want to import before clicking Import CD. When all songs show a green check mark, take out the CD by clicking the eject button on the left side of iTunes.

If you weren’t connected to the Internet when you originally imported the CD, each track will appear untitled. Tracks may also appear as untitled if they are not in Apple’s music database.

To remedy this, connect your PC to the Internet, select the untitled songs by clicking the first untitled track, holding the SHIFT key on your keyboard, and then clicking the last untitled track. This should automatically highlight all the untitled songs between the tracks you clicked. Next, click Advanced from the toolbar and click Get CD Track Names. iTunes automatically connects to the Internet and downloads the appropriate information. You can also manually add the artist and track titles by highlighting the track, clicking the Name or Artist field, and then typing the appropriate data. Press ENTER when you’re done to save the change.



If album, artist, and track names could not be found online, you might encounter this message in iTunes.

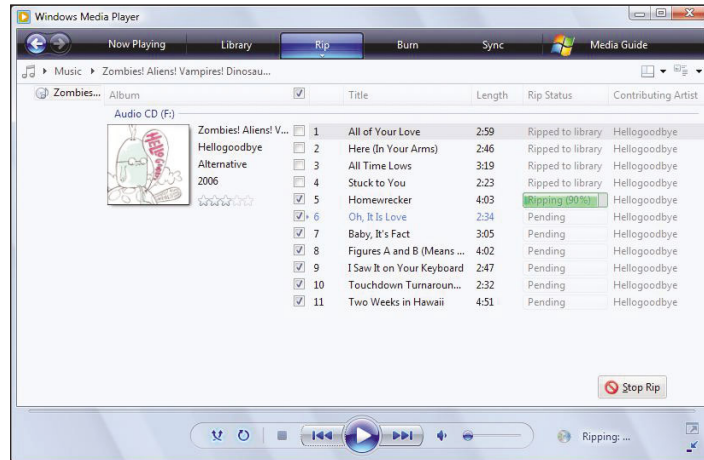


**Take more control.** When you import a CD using iTunes, the audio tracks are stored in one of two locations depending on your operating system. If you're using Windows XP, look in the My Documents\My Music\iTunes folder. If you use Windows Vista, look in the <Username>\Music\iTunes Music folder. iTunes imports your music using either 128kbps (kilobits per second) AAC (Advanced Audio Coding), which is the default setting, or 160kbps MP3 compressed formats. Changing from the default AAC encoder to the MP3 encoder is only necessary if you plan to play your digital music library with a non-Apple media player or other non-Apple device. To configure iTunes to import with the MP3 encoder, click Edit and select Preferences. Click the Import Settings button, select MP3 Encoder from the Import Using drop-down box, and click OK. To change the kbps setting, click Edit, Preferences, Import Settings, and then use the Setting drop-down box to adjust the setting. A higher kbps setting will result in a higher-quality audio recording but also one that takes up more storage space on your PC.

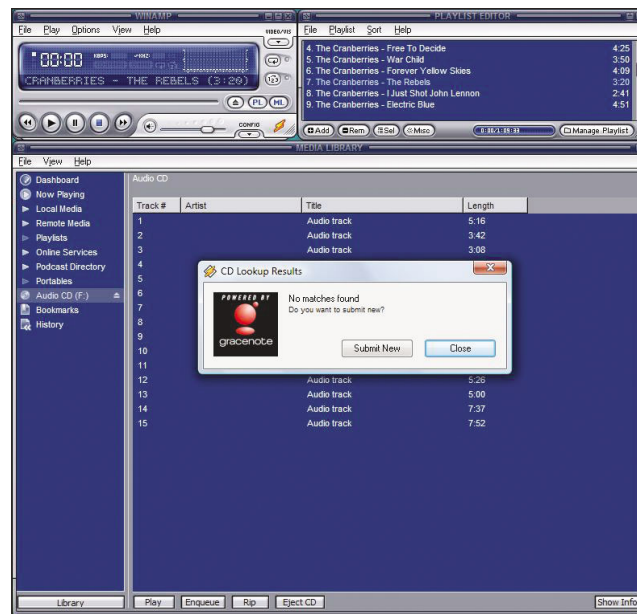
### Rip With WMP 11

Windows Media Player is the default media player for Windows-based operating systems, and version 11 ships with Windows Vista and is available to WinXP SP2 (Service Pack 2) users as an update. Launch WMP 11 by clicking Start, All Programs, and then clicking Windows Media Player. Click the Rip tab and then load the CD you want to copy into your PC's optical drive. If you're connected to the Internet when you load the CD, WMP 11 will automatically download the album, artist, and song information and display it on the screen. WMP 11 also automatically downloads album art.

Typically, WMP 11 will begin ripping the CD to your PC once you click the Rip tab, but if this does not occur, you can manually start the process by clicking the Start Rip button in the lower-right corner. You can also use the



Windows Media Player uses checkboxes to let you select the songs you want to rip.



Winamp lets you submit new album information when it's not found in the database.

checkboxes beside each song to exclude any you don't want copied to your PC.

If you aren't connected to the Internet when ripping, you'll typically see a pop-up informing you that the tracks, artist, and album will be identified as Unknown. Click OK to proceed, connect to the Internet, click the Library tab, right-click the CD icon, and then click Find Album Info. Most often, the Best Match in the right pane

of the Find Album Information window is the best option; if so, select it, click Next, and then click Finish. If not, scroll down to view other albums that match. If the audio you just ripped is particularly obscure, Microsoft's music database may not have a match, in which case you'll have to manually enter it. To do this, highlight the song you want to rename and then click it again to edit the field. Type the song

## Album Art

**Y**ou may have converted your music to digital, but that doesn't mean that the colorful album artwork has to fall by the wayside. All of the media players covered here let you add and view album artwork. Read on for some tips on how to get artwork to show up on your preferred player.

**Get iTunes artwork.** Missing album artwork in iTunes appears as a generic music note on a black background. To obtain missing album artwork in iTunes, first make sure you have an iTunes Store account and are signed in. Next, select a song from the album, click Advanced from the top of the interface, and click Get Album Artwork. A pop-up will notify you that data regarding missing artwork will be sent to Apple, so just click the Do Not Ask Me Again checkbox and then click the Get Album Artwork button.

**Get WMP 11 artwork.** To obtain missing artwork in Windows Media Player (a generic CD icon appears in the album cover's place), right-click the album and click Find Album Info. Follow the on-screen prompts to select the best match for the album to which you're looking to add art.

**Get Winamp artwork.** Winamp lets you view album artwork in a separate window. To easily view available album artwork, first make sure you're using the Modern skin. Click Options, Skins, and then click Winamp Modern if it is not currently selected. Next, click View from Winamp's toolbar and then click Album Art. If the generic llama image appears in place of the album art, you can manually obtain artwork by right-clicking the Album Art window and clicking Get Album Art. **I**

name and press ENTER to continue. To edit the album name and artist name, simply right-click them, type the new data, and press ENTER to finish.

**Take more control.** WMP 11 in WinXP rips music to the My Documents\My Music folder. Vista users can find their ripped music in the <User-name>\Music folder. Like iTunes, WMP 11 creates 128kbps WMA (Windows Media Audio) files by default. Many Windows-based media players and devices support WMA-formatted music, but you can change the compressed format to MP3 if you'd prefer. To do so, right-click an empty spot on the toolbar at the top of WMP 11 or press the ALT key on your keyboard. Next, click Tools, Options, and then click the Rip Music tab. Use the drop-down box to choose the format and the Audio Quality slider to choose the bit rate. Again, choosing a higher bit rate will generate a better-sounding audio file but also a larger one. The Rip Music tab also lets you determine where the ripped music will be stored, whether your music should be copy-protected, when to automatically rip music, and whether to eject the CD when ripping is complete.

### Go Digital With Winamp

Nullsoft's Winamp media player ([www.winamp.com/player](http://www.winamp.com/player)) was cutting its teeth on digital media years before

the iPod was even a twinkle in Steve Jobs' eye. The latest version, Winamp 5.541, is a solid audio player built on an equally sound legacy. To get a CD ripping tutorial, visit [media.winamp.com/main/help/50/Winamp5.htm](http://media.winamp.com/main/help/50/Winamp5.htm) or launch Winamp and click Help, select Winamp Help, click Ripping And Burning With Winamp on the left side of the page, and then click Ripping CD Tracks To Your PC.

To rip with Winamp, insert a CD into your PC's optical drive and launch Winamp. If Winamp's Media Library is not already visible, click View from the toolbar and then click Media Library. Next, click Audio CD from the leftmost pane of the Media Library window. If you're connected to the Internet, Winamp will automatically connect and download the artist and song titles for the album. If you're not connected to the Internet, or if the CD you're ripping is obscure, a pop-up window will let you manually add that data by clicking Submit New. If you miss your opportunity, you can always go back and manually change the artist and track names by right-clicking anywhere in the right pane and selecting Edit CD Info.

To begin ripping the songs, click the Rip button at the bottom of the page and select Rip All Tracks or Rip Selected Tracks. If you only want to rip a handful of songs from a given CD, press CTRL, click the songs you want

to rip, click the Rip button, and then click Rip Selected Tracks.

**Take more control.** To change the default ripping parameters, click the Rip button and then click CD Ripping Preferences. Click the Encoder, Ripping, and Output File Settings tabs to change the encoding format and bit rate, ripping speed, and location of the audio files on your PC, respectively. By default, Winamp encodes songs as 128-bit AAC files and stores them in the My Music (WinXP) and Music (Vista) folders. On the Encoder tab, use the drop-down box to select from various AAC, WMA, and other formats. Use the Bitrate drop-down box to select the desired audio quality (higher bit rates are better but also produce larger files). To change the location of your ripped music, click Output File Settings and then click Browse to navigate to an alternative location. Click Close to exit the Winamp Preferences dialog box.

### Be A Digiphile

When in digital format, your music is easier than ever to store and move among computers and devices, and you don't even have to be a geek to enjoy these benefits. Media players do all the heavy lifting; all you have to do is click and listen. **II**

BY ANDREW LEIBMAN

Many of our readers come across fast, easy ways to solve a problem or accomplish a task. Well, we'd like to hear about it! If you have a great tip you'd like to share, email us at [readertips@smartcomputing.com](mailto:readertips@smartcomputing.com). If we print your tip, we'll send you a free *Smart Computing* T-shirt. You'll be the envy of all (well, some) of your friends.

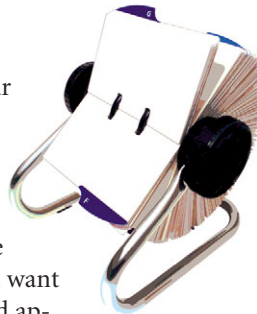
Please include your first name, last name, and address, so that we can give you credit if we print your tip. (And so that we can send your T-shirt to you, of course.) Please limit your tip to 200 words or fewer. Not all tips received will be printed, and tips may be edited for length and clarity.

## Short & Simple Tips To Make Things Easier

### *Find Contacts Quickly, Easily*

In order to quickly open a specific contact record in Outlook, set up your Contacts list to display as Address Cards by clicking View, Arrange By, and Current View and then selecting Address Cards. Now click any Contact in the list to highlight it. Type the initial letters of the contact name you want to open, and when that contact record appears highlighted, press ENTER or double-click the name to open it. This is especially quick when you have a large number of contact records.

**Jean A., Staten Island, N.Y.**



mouse for several months. When they run out of power, I simply replace them with a fully charged pair of used batteries and recharge the used pair. My wife and I each use this system.

**David R., Sebring, Fla.**

### *Email An EXE File Without Hassles*

If you've ever tried to send an EXE file through email, you've probably realized that it's not uncommon for email services to block EXE files from being sent as attachments. An easy way to get around this is to change the .EXE file extension to something else, such as .TXT. Windows will tell you that the file may become unusable, but ignore the message and click Yes. Instruct the person receiving the file to change the extension back to .EXE, and you should be good.

**Neil D., Batavia, N.Y.**

### *Get The Most Out Of Rechargeable Batteries*

I move the NiMH (nickel-metal hydride) rechargeable batteries that can no longer power my digital camera to my wireless mouse. These almost-empty batteries have more than enough power to run my



### *Deleting Cookies In IE7*

To cut down on cookies, I have customized the privacy options in IE7 by clicking Tools, Internet Options, and the Privacy tab. Click the Sites button and enter specific Web site addresses that are allowed or not allowed. You can also click the Advanced button to set first-party cookies to Prompt and third-party cookies to Block. This has eliminated 90% of my unwanted cookies.

If you just want to delete unwanted cookies, do the following: While still in the Internet Options window, click the General tab and under Browsing History, click Settings. In the resulting Temporary Internet Files And History Settings window, select View Files. All of the cookies will appear and can be individually deleted.

I should mention that the folder will be full of images and other items unless you first do the following: While under the General tab as described above, click the Delete button under Browsing History and click Delete Files next to Temporary Internet Files. This will rid the folder of extraneous images and other files and leave only cookies.



**Richard F., Mentor, Ohio**



# Never Too Early For A Little Spring Cleaning

**Product Info**  
**Spring Cleaning 10**  
\$49.99  
Smith Micro  
(949) 362-5800  
www.smithmicro.com

So what if it's winter? Your computer knows no season, only that it needs consistent attention to keep the clutter down to a minimum.

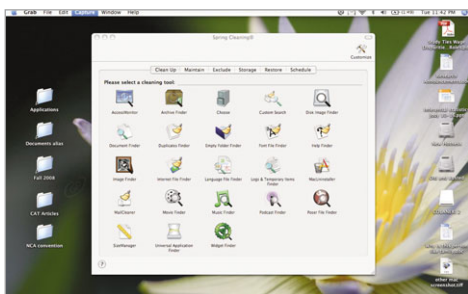
Over time, your computer collects corrupted files, duplicate files, excess flab in applications, and more. All of this can negatively affect the computer's performance; you can get most of that lost efficiency back with a muscular piece of software called Spring Cleaning 10.

Spring Cleaning 10 is a multifaceted application designed to keep your Mac uncluttered and running fast. It even helps you protect private data. And backs up your system. And finds duplicates of files so you can delete the ones you don't need. And lets you schedule and automate the various tasks it can perform. And much more... are you getting the idea?

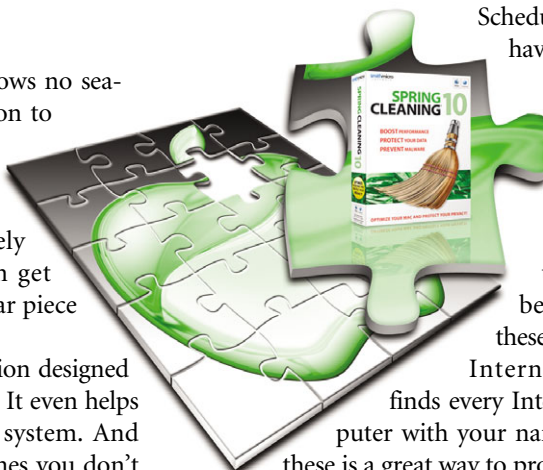
It's difficult to describe exactly what Spring Cleaning 10 does because it has so many facets. There are 45 different tools and actions packed into this one application. To name a few, it finds corrupted and duplicate files and folders, creates disk images, finds certain types of files, automates tasks, organizes and compresses large collections of photos, attaches "stuffed" files to emails, permanently and securely deletes sensitive files, and scans your system so you can note any changes that have been made since the previous scan.

## Maid For Your Computer (That's A Pun, Folks)

To install Spring Cleaning 10, double-click the installer and choose a hard drive to install it on. Once complete, you'll have to restart your computer to finish installation. After the restart, navigate to the Spring Cleaning folder, launch the application, and get ready for a smorgasbord of options. You get six tabs: Clean Up, Maintain, Exclude, Storage, Restore, and



Spring Cleaning 10 is loaded with powerful tools that will help keep your computer running smoothly.



Schedule. Start clicking each and have fun.

## A Sampler

Spring Cleaning 10 has many features, and they're all fairly easy to use. But just to give you a better idea of what some of these tools do, here's a sampling.

**Internet File Finder:** This tool finds every Internet record on your computer with your name on it; deleting some of these is a great way to protect your privacy. Click the Clean Up tab and double-click Internet File Finder. Select the Web browsers and types of files you want to search for, click Search, and the program will display every Internet file with your name (and more) in it. You can delete the files listed. (NOTE: You might want to leave some of those files alone. Some are useful, such as cookies that keep info to make logins easier.)

Here's another: **Language File Finder.** This finds extra languages in your applications and deletes the unnecessary ones. Click the icon to open the tool. Choose the location to search (On My Computer, On My Desktop, etc.). Check the Apply Search Filter box to search by name, file name extension, size, etc. Once your parameters are set, click Search. The list of extra folders will appear, and you can delete what you want.

## Tweaks

When you perform any searches, you can set a filter to exclude certain folders from the searches to save time. Click the Exclude tab. Click the arrow next to each folder and click the ones you want to exclude. Further customization is possible by setting preferences, as well as setting search parameters such as Filename, Date, keywords, and so on.

A downside to Spring Cleaning 10 for some may be that there are just too many options. It can be overwhelming to try to use all of them. Perhaps some of these features could be integrated for a slicker user experience, or maybe some tools could be automated. But in reality, who cares? Spring Cleaning 10 is relatively inexpensive and loaded with useful tools.

It's not something you'll use every day, but like a well-organized toolbox, it's there when you need it. Besides, it's never too early for a good spring cleaning. ■

## Web Tips

# Enhance Your Time Online

### Streamline Your Decision-Making

**Problem:** It's difficult to get my co-workers to agree on certain proposals, and meetings tend to become time-wasters.

**Solution:** The beauty of a good Web site is often its ability to streamline or automate routine tasks that require a lot of management. Zapproved (www.zapproved.com) is a new approval management site. Create a proposal in what looks like an online email form, enter the email address of the folks you need to sign off on the proposal, and wait for them to approve (or not). Group members can also leave comments if a discussion is necessary. While this has obvious uses in business, it can also be helpful if you are organizing an event such as a baby shower, wedding, or anything else that requires multiple people to reach a consensus to move forward.

### Help Web Sites With Bug Fixes

**Problem:** I have a lot of ideas about how to improve sites I use regularly. When I run into problems, what's the best way to inform the developers of the bugs?

**Solution:** Any good site will have a contact page that gives you a way to

contact the developer if you find problems or bugs with the site. But a new site has sprung up that takes advantage of a group's willingness to identify problems and find solutions when there is an open call and a forum in which to discuss issues. Commonly called crowdsourcing, this activity is on full display at Userfix (www.userfix.com), where users can report bugs and request features for sites. Developers are not required to participate, but the hope is that an active discussion will motivate site owners to take action.

### Make Web Pages More Print-Friendly

**Problem:** I hate it when I print a page from a Web site, and I get multiple pages of ads, images, and legal text that I don't need.

**Solution:** Print What You Like (www.printwhatyoulike.com) is a beautifully simple service that allows you to reformat Web pages for easier printing.

You can remove background images and colors, remove graphics, select certain blocks of text, and even change the font type and size. Enter the URL of the page you want to print in the provided box, and a left-side control panel pops up with all the buttons you need to customize the view.



A before-and-after shot of a site made print-friendly.

### Share Your Virtual Business Card

**Problem:** I'm looking for a quick and easy way to share my contact information with people I meet.

**Solution:** There's a site called rmbrME (rmbrme.com) that hosts a virtual business card complete with photo, contact info, and links to your social network pages. The big

win here is that once you set up your info on the site, you can text someone's mobile phone number to 762763 (RMBRME), and that someone will get a text with a private link to your

info. This site's services work with any phone that can send and receive text messages. Text messaging rates apply, but the service itself is free.

### Block Persistent Telemarketers

**Problem:** I signed on to the Do Not Call List, but I still sometimes get sales calls. Is there a way to stop these unwanted solicitors?

**Solution:** The best way is to complain... but how and to whom? PhoneSpamFilter.com (www.phonespamfilter.com) attempts to answer these questions by offering a large database of telemarketer phone numbers. When you get a spam-like sales call, check your caller ID and then

look up the number on this site—you'll see if others have already complained about them. To fully take advantage of this site, you'll need a phone system that can use their filter script—either a PBX system, a Windows-based phone routing system, or VoIP (Voice over Internet Protocol). ■



Zapproved provides a different way to track a project, based on proposals and approvals.

# Find It Online

## Discover Your Hobby Online

Compiled by Kris Glaser  
Illustrated by Lori Garriss



### PhotoSecrets.com

[www.photossecrets.com](http://www.photossecrets.com)

If you're new to the hobby of photography and need a few helpful hints to get started, check out this site. There are four online books that you can browse, including "Tips for Better Photos," "How to Sell Your Photos," "Travel Photo Tips," and "The Law for Photographers." You'll find sections that explain the basics of taking great photos and the equipment you'll need to do it. There are also tips on how to create photo journals and a section that covers the legal rights of photography.

### Hulu.com

[www.hulu.com](http://www.hulu.com)

Many of us share the hobby of catching up on our favorite TV shows over the weekend. If you missed a pivotal episode of this season's most popular drama, don't sweat it. You can watch it by pointing your browser to this site, which features almost every show you can think of. The best part? It's all free. You can also watch full-length movies free, (though each movie contains three or four 30-second commercial breaks). Hulu is also great for sharing your

favorite TV shows, movies, and clips with friends, because you can send media as an email or post to your preferred social networking site.

### FictionAddiction.NET

[www.fictionaddiction.net](http://www.fictionaddiction.net)

If you like to write, but can't get rid of your writer's block, visit this site. You'll find a wide array of resources to help jump-start your writing. Browse daily

writing prompts, search the bookstore for writing guides, and join email workshops to help you while you're writing. You can even post your writing for others to comment on in the Writers Showcase or read other members' essays, short stories, and novels.

### Genealogical.com

[www.genealogical.com](http://www.genealogical.com)

For the genealogy hobbyist, this site is sure to point you to valuable resources for gathering and arranging your family's history. You can find books and CDs that cover a wide variety of genealogy subjects, such as beginner guides, maps, and dictionaries. You can sign up for Genealogy Pointers, the site's weekly e-newsletter that features products, special offers, and tips. You can also visit Genealogy Links (found near the bottom of the site), which features a list of other useful genealogy resources.

### Petfinder

[www.petfinder.com](http://www.petfinder.com)

For many of us, pets are our biggest hobby. If you're looking to adopt a new member into the family, check out this

site, which lets you search for adoptable pets in your city. Simply enter your preferred pet (such as cat or dog), breed, gender, age, and location and then browse the list of pets that need a good home. If you can't have a pet at home, you can use the Help Pets section to find nearby animal shelters that need volunteers. The Learn section gives you plenty of information on how to care for your pet's grooming and feeding needs and lets you post questions you have for other pet lovers to answer.

### eMusic

[www.emusic.com](http://www.emusic.com)

Music collectors will love this site, which offers thousands of music tracks that you can download in MP3 format without DRM (digital rights management). The service is subscription-based, meaning you pay a monthly fee to download a certain number of songs. Plans range from \$11.99 per month for 30 songs to \$19.99 per month for 75 songs. You can also purchase audio books from the site, which are also subscription-based (one book for \$9.99 per month or two for \$19.99 per month). Many online music stores will rent you the music you buy, but when you purchase music from eMusic, you own the media indefinitely.

### List Of Hobbies

[www.listofhobbies.org](http://www.listofhobbies.org)

Are you looking for a hobby that will help you relax after a long day of work? Check out this site, which lists hundreds of ideas for hobbies that you can try. Browse hobby ideas by clicking List Of Hobbies or Top Hobbies to find ideas, such as calendar collecting or scrapbooking, or choose one of the specialized hobbies from the menu, such as coin collecting or knitting. My Hobby Store features books that teach about specific hobbies, which you can purchase at this site. You can also find links to other great hobby sites under Hobby Blog, such as MyList-OfHobbies.com, a site where you can share your hobby achievements.



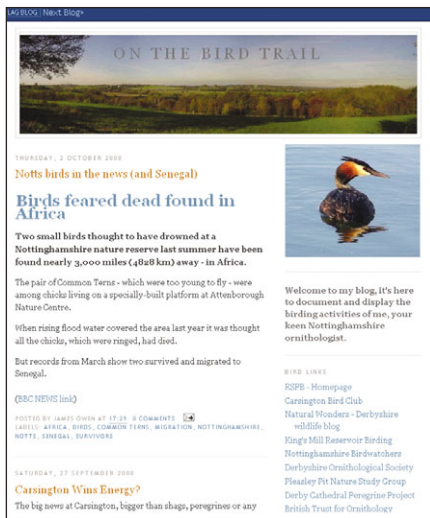
## That's News To You

Finding the appropriate online group to match your interests can be a monumental task. So each month, we scour the Internet to bring you the friendliest forums and most interesting bloggers the Web has to offer. This month, we take a look at a blog that features entries about one of the oldest and best-loved hobbies: bird watching.

### On The Bird Trail

[www.birdtrail.blogspot.com](http://www.birdtrail.blogspot.com)

For those of us who share a common interest in bird watching, this blog by James Owen is a treat. Owen started his blog in 2003 and has faithfully updated it with posts about the various places he has



visited and the different species of birds he has encountered and photographed. As Owen states on his site, birds are one animal with which we have constant contact, so we should enjoy their company. Owen fills his site with dozens of pictures and stories about his bird-watching adventures and also includes links to other bird-related and environmental sites.

## Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month, we feature highlights from our pickings. This month, we check out software to make genealogy research easier and movie-categorization more fun.

### MyHeritage Family Tree Builder

[www.myheritage.com](http://www.myheritage.com)

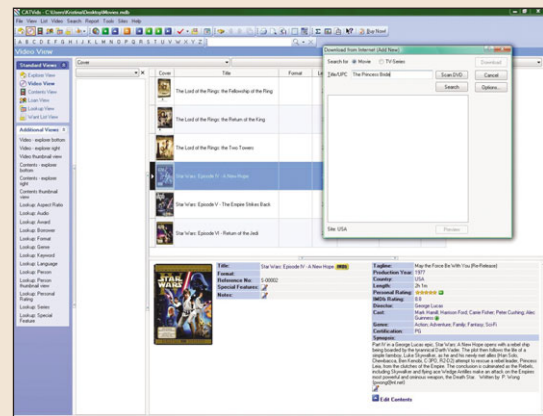
If genealogy is your hobby, you'll love MyHeritage's Family Tree Builder, which is a free program that lets you create a visual family tree with just a few clicks. This software is fun to use; you can add as little or as much biographical information as you want for each family member, such as birth or death dates, contact information, and even physical information such as height and eye color. You can also add pictures of your family members and share your tree with the rest of the family by creating a MyHeritage Web site and publishing your family tree on the Internet.

To download the Family Tree Builder, visit the address above and click the Downloads link at the top of the page. On the resulting page, click Download Family Tree Builder and save the file to your hard drive. Install the program and then restart your computer.

### CATVids Version 8

[www.FNPrg.com](http://www.FNPrg.com)

Keep track of your movies with this software, which allows you to create a searchable database from your growing movie collection. You can manually enter information about each of your movies, or you can use the Download From Internet tool to download movie images, synopses, publishing dates, cast, and other information, making your database creation quick, easy, and thorough.



CATVids helps you organize and keep track of your movie collection, even movies you've loaned out to friends and family. Adding movies is a breeze with the Download From Internet tool.

There is even an option for loans, so you can keep track of which friends borrowed which of your movies.

You can try CATVids free for 30 days, and if you like it, buy it for \$39.95. There are also other CAT database programs for your music, book, software, and stamp collections. ■



# Where To Get Device Drivers

## The Manufacturer vs. Device Driver Download Web Sites

**S**trip away the tech jargon that's often used to describe device drivers, and you're left with pretty much nothing more than small programs that serve a specific and important function—helping an OS (operating system) speak to the

hardware connected to a computer. As an example, think of Windows as the contractor of a construction project, the computer as the construction site, and a digital camera as a subcontractor hired to perform a service. The foreman making sure everyone is on the same page is the device driver; the only guy who can make sense of what Windows and the digicam are trying to say to each other.

Despite the importance of the purpose drivers serve, relatively little has been written about them through the years. In fact, many users remain unaware of their existence until encountering a driver-related hiccup, which can be serious. It's not impossible, for example, for a corrupted or outdated driver to cause complete system failure. Fortunately, most problems are less severe, although an incompatible video card driver that leaves your monitor screen black or an outdated printer driver that botches an important print job are still formidable obstacles to have to face down. Thankfully, you can fix many driver-related problems by downloading an updated driver from a device manufacturer's Web site (look in the site's support section). Better, these updated drivers often contain functions and performance benefits that the device didn't have when the manufacturer originally released it.

Beyond manufacturer sites, device drivers are available through Windows and from driver download Web sites and third-party developers. Attach an external hard drive to a Windows Vista machine, for example, and Vista will likely have a signed, or certified, driver among the stash of thousands of

drivers the OS preinstalls that will enable the device to work. Further, Microsoft constantly adds new drivers to Vista's reservoir through Windows Update. (For specifics on how to download and update drivers, see "Safe Driver Habits," July 2008, page 64.)

Drivers from third-party developers, meanwhile, are typically optimized to squeeze better performance from a device or resolve issues the manufacturer has yet to resolve. OmegaDrivers.net, for example, is a longtime supplier of optimized drivers for video cards. Another example is NGOHQ.com's NGO Nvidia Optimized Driver, which is "a modified version of the Nvidia ForceWare driver" that's "especially suited for enthusiasts and gamers who want to have the best gaming experience." Although third-party drivers can be beneficial, know that most third-party developers have no affiliation with manufacturers. In 2008, for example, Daniel Kawakami received kudos from fellow users for independently releasing drivers that fixed instabilities between Creative Labs sound cards and Vista. Kawakami also caught the attention of Creative, which initially voiced its disapproval and asked Kawakami to cease distributing the drivers.

### Wanted: A Good Driver

Although Windows and manufacturer Web sites are typically the best sources for updated drivers, driver download Web sites are arguably the most convenient route, due largely to the thousands of manufacturer-created drivers they offer and organize for dozens of devices all in one location. These traits come in handy if you're moving from an older OS to a newer one and need to find multiple drivers at once or if you need a driver for an older device. For example, say you buy a printer at a garage sale, but the original software disc containing the device's driver is long since gone, and the manufacturer went belly up years ago and no longer supports the printer. Chances are still good that you can find a



driver for the printer at a driver download site and get the printer running.

Driver download sites essentially come in two varieties: those that let you search and download drivers free and those that let you download drivers with a string attached. That string might include anything from having to register a free account to paying a daily, monthly, yearly, or one-time access fee. Other sites may scan your system to identify your devices and find bad and outdated drivers free, but ask you to pay a fee before installing the replacement drivers. Yet other driver sites tout themselves as a resource for drivers, but instead only attempt to sell you software.

Another characteristic to keep in mind about device driver Web sites is that although most let you search for drivers among a vast array of devices, not every site archives drivers on its own site. Many instead just link you to the manufacturer's site to get the driver. As such, it's not uncommon to find broken or outdated links. Also, some sites that do archive drivers may not have the most current driver. The following driver download sites are ones we've found to possess enough positives to make them worth exploring.

### DriverAgent.com

If you don't mind paying someone to do your driver dirty work, DriverAgent, owned by BIOS (Basic Input/Output System) maker Phoenix Technologies, is a well-known option. Finding a driver at the site means first downloading and running DriverAgent's driver scan utility, which installs as a plug-in for your browser. The utility performs a scan of your system to identify the operating system and connected devices and to seek out good and bad drivers on your computer. The utility then presents the findings in a list that includes a pie chart that visually depicts the percentage of good vs. bad drivers. DriverAgent offers replacement drivers for those it deems as bad, but you'll need to fork over \$29.95 first. That buys you unlimited driver downloads for a year for up to 10 computers.

### DriverSearch.com

DriverSearch.com doesn't appear to be more than a Google-like search engine for drivers, initially. Dig deeper and there's plenty worth exploring. To search for a driver, just type a company or product name in the search engine field and click Driver Search. Each result that DriverSearch.com returns contains a link to available drivers for your chosen device. Conversely, clicking the Driver Sites link presents a list of nearly 20 searchable hardware categories, including BIOS Drivers, Camera Drivers, etc. Either method eventually leads you to downloading driver files from DriverGuide ([www.driverguide.com](http://www.driverguide.com); see below). Although DriverSearch.com's



**Downloading drivers at DriverAgent.com involves using a Driver Updates utility that runs from a Web browser and lists good and bad drivers it finds on your system.**

design looks a little long in the tooth, it's logically organized and easy to use.

### DriverGuide.com

DriverGuide has been in the device driver business for years, and the site is dripping with information that reaches far beyond drivers. Unfortunately, the site is a bear to navigate, and trying to download even one driver can be a confusing, lengthy process. More positive is that DriverGuide's driver database numbers in the hundreds of thousands. Downloading a driver entails first

completing a free registration that somewhat annoyingly involves clicking through multiple pages of sponsored product offers. Once registered, you can download five drivers per week from a limited portion of DriverGuide's 400,000-plus driver database. Downloading more drivers from an expanded pool requires a Plus (\$6.95 for two days or \$29.95 annual) or Pro (\$49.95 a year) plan. DriverGuide does offer a free driver-scan utility bundled in a ToolKit package. The utility displays your system's installed devices and drivers, but downloading drivers from within the utility and using certain ToolKit functions means paying for a plan.

### WinDrivers.com

WinDrivers.com bills itself as, "the world resource for Windows tech support and drivers." Spend a few minutes on the site, and it's hard to dispute the claim. WinDrivers.com's tech support offerings—BIOS, DLL Files, Identify Hardware, Networking, Hard Drives, etc.—alone make the site a valuable resource. A Driver Updates section, meanwhile, not only organizes drivers by the month released back to 2004, but it also includes recent releases for BIOS, firmware, virus, and threat alert categories. WinDrivers.com falls under the umbrella of Internet.com, which by default puts tons of tech-related information within reach, but driver downloads do require a free Internet.com account.

### Behind The Driver's Seat

Other driver download Web sites that we've found worth exploring include Softpedia.com (free; [softpedia.com](http://softpedia.com)), Techspot.com (free; [techspot.com](http://techspot.com)), and Driversbay.com (free; [driversbay.com](http://driversbay.com)). Whether you download drivers directly from a manufacturer or driver download site, however, it's important to remember to regularly check that your drivers are up-to-date in order to get the maximum performance, functionality, and protection for your devices. ■

BY BLAINE FLAMIC



# Aged Tips For The New Year

**H**appy New Year! Let's hit the ground running and start 2009 off with a potpourri of tidbits that have been aging nicely in my thermostatically controlled tips cellar. As your digital sommelier, you have my assurance that I will serve no tip before its time.

If you've grown weary of Vista's exhaustive shutdown process (Start orb, right-facing arrow, Shut Down), why not make life easier for yourself by creating a Desktop shutdown shortcut? Right-click your Desktop and select New and Shortcut. In the Type The Location Of The Item field, enter `shutdown.exe -s -t 00`. (Those are two zeros, not the letter O.) Click Next and name your shortcut, perhaps something witty and clever such as "Shutdown," and click Finish. If you're feeling frisky, you can even drag this shortcut to your Quick Launch bar. Bonus tip: Substitute the letter R for the S, and you'll create a shortcut for restarting Vista.

**Browser quickie:** To pop your cursor into your browser's Address field, press ALT-D. Love it!

**SD (Secure Digital) memory cards** are handy little storage devices, but if you attempt to copy a file to an SD card and you encounter the dreaded This Disc Is Write-Protected message, don't collapse into a quivering heap. If moving the little write-protect switch on the card doesn't resolve the problem, place a small piece of tape over the switch and then insert the card again. This embarrassingly low-tech tip usually does the trick.

I recently received a message from a person who expressed unhappiness with the number of problems he encountered after installing Chrome, Google's new browser ([www.google.com/chrome](http://www.google.com/chrome)), available as a beta version. A word to the wise about beta products: When you install beta (test) applications, you assume any risks associated with that software. If it works as represented, wonderful; if it doesn't, that's the way the digital ball bounces. For many people, using beta software just isn't their cup of latte, so if that's how you feel, you might want to wait for a commercial release. Beta software provides an opportunity to take an unfinished product for a test drive—nothing more, nothing less.

If you have cable or DSL (Digital Subscriber Line) and suddenly discover that you cannot access the Internet, once you regain consciousness, reboot or resync your cable or DSL modem. The same holds true if you experience a loss of connectivity with a router. Reboot, resync,

recycle—call it whatever you want, but just unplug it, wait 30 seconds, and then plug it back in. Wait a few minutes while it gathers its wits about it, and there's a good chance you'll be back in business. If you call for tech support, this is the first thing Bangalore Brad is going to suggest, so you might as well save a phone call and try it yourself first.

By default, Outlook Express opens to a start screen that you probably click through to access your inbox. You can save that grueling step and have Outlook Express open directly to your inbox by first clicking Tools, Options, and the General tab. Next, place a check mark next to When Starting, Go Directly To My Inbox Folder and click Apply and OK. Close, then reopen Outlook Express, and you'll be eyeball-to-pixel with your inbox.

If you're using AOL (you are in my thoughts and prayers) and you want to jettison the annoying AOL drop-down Web search window that pops up every time you log in, click Keyword and Go To Keyword, type `search window` in the resulting box, and press ENTER. Click the Opt Out button, followed by OK.

Google ([www.google.com](http://www.google.com)) tries to be helpful by providing suggestions when you enter a search query. If you consider this well-intentioned assistance to be annoying or perhaps overly intrusive, click Preferences (located to the right of the Search field). Scroll down to Query Suggestions and select the Do Not Provide Query Suggestions In The Search Box radio button and click Save Preferences.

**Coming up next month:** Last October, I profiled my favorite online addictive games. I concluded with an invitation to share your favorite online addictions—well, limited to games because this is a family-oriented magazine—and you came through with flying colors, as you always do. So rest up, put on a pot of coffee, or break out the Red Bull because you're going to be up for days once you start exploring next month's offerings. I had to personally test each submission, of course, and they were so good they almost ruined my life. Trust me, they're wickedly addicting, so don't say I didn't warn you. Next month: Let the games begin! ■

BY MR. MODEM

Mr. Modem, (Richard Sherman) is an author, syndicated columnist, radio host, and publisher. "Mr. Modem's Weekly Newsletter" provides personal responses to subscribers' computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit [www.MrModem.com](http://www.MrModem.com).

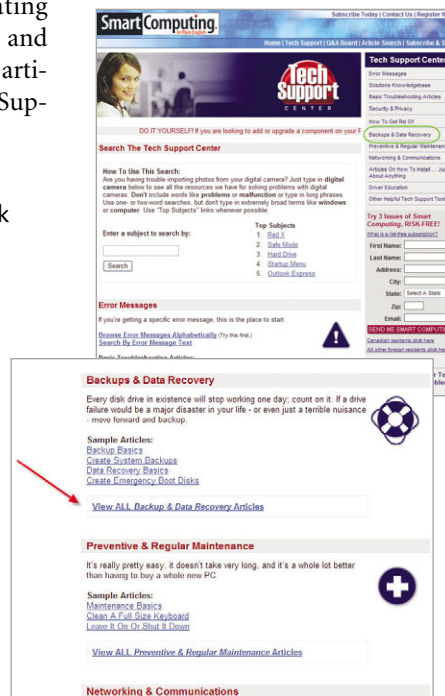
# Check Out The Tech Support Center

The Tech Support Center at SmartComputing.com has always been the place to find helpful information for all of your computing troubles. Check out the Networking & Communications area to find out how to install and configure your home network properly. You'll find out how to set up your wireless network, fix wireless connection problems, and much more. Be sure to take a look at the Backups & Data Recovery section, as well. This area contains articles that explain the ins and outs of creating system backups, recovering lost data, and other backup basics. Check out these articles at SmartComputing.com's Tech Support Center today.

1. Go to SmartComputing.com and click the Tech Support Center link on the home page.
2. Click Backups & Data Recovery or Networking & Communications.
3. Click View ALL Backup & Data Recovery Articles or View ALL Networking & Communications Articles to view articles in those areas.

Be sure to store all of your articles and information in your Personal Library to keep for future reference. Simply log in, and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like to keep your information organized and accessible.

## Tech Support CENTER



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### Web-Only Articles



Smart Computing's Tip Of The Day (Oct. 28, 2008)

### HD source

Your HDTV (high-definition TV) won't give you a high-def picture unless the signal going into your set is HD, too. Not all digital channels are really HD, so check with your provider to make sure you're receiving high-definition channels. You'll get the best image quality from true HD sources.





# BACKUP 101

## Prevent A Data Disaster

**T**he consequences of not backing up data need no explanation. Just imagine this: You turn on your computer and nothing happens. The hard drive is gone, all the data on it is gone, and there's nothing you can do to get that data back. If that thought doesn't make you want to put down this magazine and back up everything on your computer immediately, then nothing will.

Unfortunately, backing up data is a chore. In fact, according to a survey undertaken by PC Pitstop ([www.pcpitstop.com](http://www.pcpitstop.com)), 26.5% of the 4,084 respondents never back up their data at all. Many backup programs are readily available, but they are packed with enough features to confuse anyone. Furthermore, selecting the wrong type of backup when using these types of programs can actually do more harm than good, depending on how you want to store your data.

The articles in the following section will tell you everything you need to know about specific backup media, applications, and services and how best to use them; but before reading those, you need to understand the basics of backup.

### Full Backups

When most people think of backups, they think of full backups, which

copy everything on the hard drive. The most thorough method of performing a full backup is called drive cloning, which copies everything, including Windows files that are needed if you want to restore your computer to working order after a complete hard drive failure. Less thorough full backups simply copy all user files on the system and leave Windows system files alone. Full backups that are not modified (such as those stored on recordable DVDs) are called archives, because the files within the backup never change.

Full backups are very inefficient in terms of the time it takes to create the backup and also in terms of storage space required because so much data is copied. In general, you make a full backup once and then use the following more efficient backup methods to keep it updated day-to-day.

### Incremental & Differential Backups

A major feature to look for when buying backup software is its ability to perform incremental and/or differential backups. These maintain backups of the latest versions of your files in two different ways. Incremental backups copy only the data that has been changed since a file was last backed up, meaning incremental backup jobs complete very quickly and don't require a lot of storage space. The downside is that restoring files from an incremental backup can be a lengthy process because the backup software has to stitch multiple backups together to create the whole file.

Differential backups create a completely new copy of a file that has been

- 51 Backup Media**  
Make Your Data Impervious To Crashes
- 54 Backup Software**  
Automatically Archive Your Data
- 57 Online Backup Options**  
Services For Safeguarding Important Data
- 60 Vista Backup & Restore Center**  
Set It & Forget It
- 63 Recovery Software & Services**  
Lost, But Not Gone Forever



changed. It takes longer to perform a differential backup because more data is copied relative to an incremental backup, but restoring data is much faster relative to an incremental backup because complete copies of backed up files are instantly available. Some software also lets you configure differential backups so that older copies of backed-up files are retained when the new copy is backed up. This is called versioning, as it lets you maintain an archive of different versions of the same file so you can easily revert to an earlier revision of a file whenever you wish.

## Backup Extras

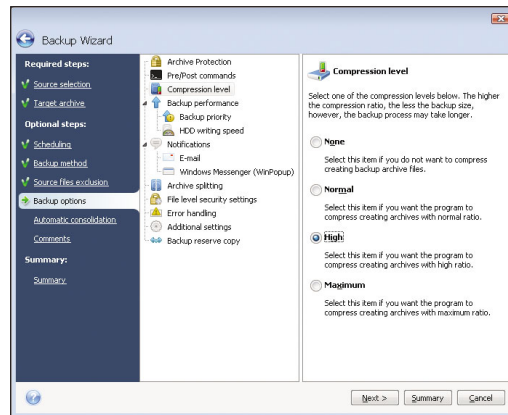
Backup software can do far more than just make copies of your precious files. Here are some additional features to look for when comparing products.

**Synchronization.** Sometimes referred to as “mirror” backups, synchronization lets you maintain identical copies of files in two places (such as the local hard drive and an external backup hard drive). This is nice for files such as pictures or work documents that you edit because the latest edited version is always backed up.

**Scheduling.** Backup software is useless if you don't use it, so scheduling is an important feature to look for. The most basic scheduling creates automatic backups on a regular basis, such as a certain time each day, but use something more sophisticated if possible.

**File filtering.** It is easy yet inefficient to back up everything on your computer all of the time. File filtering allows you to select certain types of files to include or exclude in the backup. This is perfect when you are backing up files to removable storage media, such as recordable CDs that have a limited amount of storage space.

**Compression and encryption.** Compression is technology that compacts digital files so that they require less storage space than they would otherwise require, and it works best with files that contain text. Digital



Some backup software, such as Acronis True Image Home 2009 (\$49.99; [www.acronis.com](http://www.acronis.com)), lets you compress backups so they require less storage space.

images and most digital music (such as MP3 files) are already compressed, so don't expect to use your backup software to compact them much more than they already are.

Encryption uses a key to scramble data before it is backed up, and only people who have access to the key can descramble and restore the data. It's a good idea to always use encryption when you save financial documents and other files that contain personal information.

## Backup: Step-By-Step

Although articles on the following pages will provide detailed information about backing up your data, there are a few key steps you should always keep in mind.

**Step 1: Plan.** First, you need to determine exactly what files you want to back up, staying within the limitations

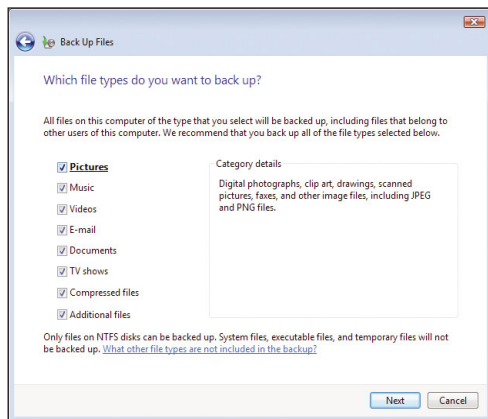
of your backup media. Backing up an entire hard drive requires a hard drive of similar capacity or a stack of optical discs, such as recordable CDs or DVDs.

If you don't want to back up the entire drive, then write down the names of all the folders containing files you do want to back up and also consider using a file filter to tell the backup software to only back up certain types of files. (You can learn more about this in the “The Backup List” sidebar.) Schedule backups on a daily basis and flag your most important files to be backed up every time they are saved.

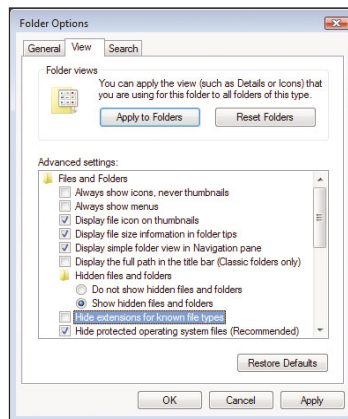
Whatever you decide, don't back up files to a different folder on the same hard drive where the originals are stored. Drive failure is a major cause of data loss, so the whole point is to store backups separately from the hard drive.

**Step 2: See if it worked.** After performing a backup, use Windows to access the backup media and check to make sure all of your files are there. If you created an encrypted





Even simple backup software, such as the utility that comes with Windows Vista, has filtering capabilities that let you automatically back up certain types of files.



You can display hidden file extensions by adjusting a simple folder option in Windows.

the method you plan to use for all of your other backups. Delete the original copy of the test file and then use the instructions that came with your backup software to restore the test file using the backup copy. Take notes as you go so you can refer to them in the future when you really need to perform a backup.

### An Ounce Of Prevention

The main idea is to back up early and back up often. Even if you are forced to use backup software that doesn't have a lot of features or have to resort to making manual copies of your files, it is imperative to do so on a regular basis and in a place other than the drive where the original files are stored. If this seems like too much of a chore, just think about the scenario laid out in the beginning of this article. You can't survive without your data, and your data can't survive without you. ■

BY TRACY BAKER

archive, check the documentation that came with your backup software to see what the file extension for that archive is and then check the backup media to see if a file with that

extension exists. (See the sidebar below for more about file extensions.)

**Step 3: Restore test data.** We recommend backing up a test file using

## The Backup List

There are certain types of critical files and folders to include in all of your backup plans, and file extensions indicate what types of files they are. For example, plain text files all have the file extension .TXT, while Microsoft Word documents often have the extension .DOC. Here is a list of typical file extensions and what type of file they are associated with.

### WORK DOCUMENTS

.TXT, .PDF, .RTF, .DOC, .XLS, .PPT, .DOCX, .DOCM, .DOTX, .DOTM, .XLSX, .XLTM, .XLTX, .XLTM, .XLAM, .PPTX, .PPTM, .POTX, .POTM, .PPAM, .MDB

### PICTURES

.JPG, .JPEG, .BMP, .GIF, .TIF

### VIDEO

.MOV, .AVI, .MP4, .MPG, .WMV, .ASF, .SWF, .RM

### MUSIC

.MP3, .WMA, .AAC, .M4P, .M4A, .OGG, .MIDI, .WAV

### E-MAIL

.PST, .DBX, .MBX

### FINANCIAL RECORDS

.MNY, .QTX, .QPH, .QEL, .QDF

External hard drives, such as the Maxtor CentralAxis (\$319.99; [www.maxtor.com](http://www.maxtor.com)), provide a place to store backups that is separate from the computer's main hard drive.





# BACKUP MEDIA

## Make Your Data Impervious To Crashes

**T**he old adage, “always be prepared” is a philosophy that can be invaluable in computing. In particular, you can apply the scout motto by backing up your data onto an easily accessible copy that won’t be affected by a hard drive or system crash, such as CD, DVD, USB flash drive, external hard drive, or NAS (network-attached storage) device. You have a lot of options for external storage media, and each type offers advantages and disadvantages. In this article, we’ll examine the different types of external storage available and help you determine what works best for you.

### Discs

When you consider the affordability and ease of use that CDs and DVDs offer, it’s plain to see why discs are still an attractive option for data backup. CDs are commonly available in 650MB and 700MB storage capacities, while DVDs are offered in single-layer (4.7GB) and dual-layer (8.5GB) sizes. You’d need 13 CDs to match the storage capacity of one dual-layer DVD and seven CDs to equal the capacity of a single-layer DVD.

In addition to having different storage capacities, CDs and DVDs are sold as write-once (labeled as +R or -R, such as DVD-R) or rewriteable discs (labeled as +RW or -RW, such as CD+RW). Rewriteable discs cost more than write-once discs, and the rewriteable media typically has a life span of around 1,000 rewrites. In terms of blank CD pricing, you can expect to pay around 20 to 40 cents per write-once CD and 40 to 60 cents per rewriteable CD. Single-layer, DVD+ or -R media runs between 30 to

**You have a lot of options for external storage media, and each type offers advantages and disadvantages.**

50 cents apiece, while dual-layer and rewriteable DVDs generally cost about \$1 to \$2 per disc.

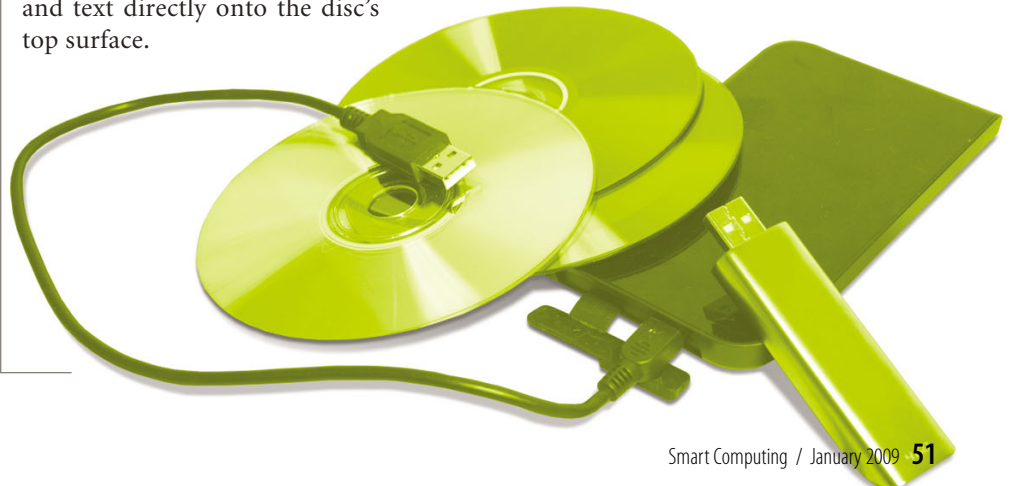
Most current DVD and CD burners support both the +R/RW and -R/RW formats, but before you purchase discs, make certain your optical drive supports the media type you want to use. Your optical drive might list the compatible formats on the drive’s face plate, but you can also reference the drive’s users manual or the manufacturer’s Web site to locate the supported formats.

When you want to give photos or music to a friend, discs are the ideal format. Another plus is that you can clearly label discs so that it’s easy to find the most recent copies when trying to restore data. For labeling, you can use a fine-point permanent marker or print out your own labels using ones specifically designed for discs. And if you have a LightScribe-capable optical drive and compatible discs, you can turn the disc over and have your PC burn graphics and text directly onto the disc’s top surface.

On the downside, the limited storage capacity of discs—compared to the storage capacity offered by external hard drives—means that you’d probably need to use a large number of discs to back up all of your data. Although you could use rewriteable discs to keep costs low, you’d need to switch the discs during the backup process. With an external hard drive or NAS device, you’d only need to start the transfer process. Another knock on CDs and DVDs is that the media can be easily scratched or dented, so you’ll need to be careful with discs that contain essential archives. Ideally, you’ll want to store any discs with critical data inside jewel cases or other protective storage.

### USB Flash Drives

When it comes to portability in storage, nothing beats a USB flash drive. Unlike most external hard drives, you can carry a USB flash drive in a pants or T-shirt pocket, and in contrast





to a DVD or CD, you don't need an optical drive and a disc-burning application to copy your files. Windows Vista and Windows XP provide native support for the USB interface, and, assuming the PC has a USB port, you can insert your USB flash drive, transfer the files you want, and be on your way.

USB flash drives use technology that has no moving parts, so you can leave the drive on a key chain or store it in your gym bag and not worry about ruining your portable storage device. Although USB flash drives offer a limited storage capacity—from 256MB to 32GB—the media isn't really meant for moving large files or long-term storage. However, a USB flash drive can be useful when you need to transport a small amount of files back and forth to another PC, such as a work computer, that serves to back up your data.

A variety of USB flash drive storage capacities are available, but, generally, you can expect to pay \$8 to \$10 per gigabyte. If the security of your data is important, consider a flash drive with integrated file encryption, such as Kingston's DataTraveler Secure (price varies by capacity; [www.kingston.com](http://www.kingston.com)) with 256-bit AES (Advanced Encryption Standard) hardware-based encryption.

### External Hard Drives

Whether your PC is primarily used for surfing the Web or storing a large music collection, it's likely that your hard drive contains more data than you can fit onto a single DVD. The large capacity of external hard drives, ranging from 100GB up to 1TB (terabyte), means that it's more likely you can back up all your data onto a single storage device. Depending on the power requirements for the external hard drive, it may require AC power to operate. Many portable drives

**Kingston's DataTraveler Secure is a USB flash drive that features 256-bit AES (Advanced Encryption Standard) hardware-based encryption to protect your data.**



with a capacity less than 500GB can be powered solely by your PC's USB connection. For instance, Western Digital's 500GB My Passport Essential (\$199.99; [www.wdc.com](http://www.wdc.com)) is powered via USB, but because some computers may limit the power to USB ports, Western Digital also includes a second USB power port on the drive.

Besides storage capacity, you'll also want to consider the type of connection, such as USB, FireWire, and eSATA (external Serial Advanced Technology Attachment), that the external hard drive uses to transfer data. Nearly all PCs now feature multiple USB ports, but many computers don't include a FireWire or eSATA port. If transfer speed is important and your computer offers an eSATA port, you can

purchase an eSATA model and copy data at speeds near the rate of your internal hard drive. Currently, the eSATA interface is more common on larger desktop drives, such as Seagate's FreeAgent XTreme series of external hard drives (\$159.99 to \$279.99; [www.seagate.com](http://www.seagate.com)).

If speed isn't a necessity, there are a variety of external hard drives that utilize USB and/or FireWire connections. Like USB flash drives, many external

hard drives bundle features that enhance the drive's functionality, such as data encryption and automatic file backup tools. For instance, the Prestige Portable Hard Drive line (pricing varies by storage capacity; [store.iomega.com](http://store.iomega.com)) from Iomega includes EMC's Retrospect Express backup and recovery software and MozyHome online backup service, so you don't need to purchase additional software to perform automatic backups. Another manufacturer that includes backup software with the hard drive is Clickfree ([www.goclickfree.com](http://www.goclickfree.com)). With a Clickfree drive, available in 120GB (\$99.99) and 160GB (\$119.99) capacities, you only need to connect the drive to your PC's USB port to begin the backup process. After the initial backup, a Clickfree drive will only update the files that have changed to expedite your file backups.

External hard drives work great for backing up the entire contents of your



**Optical media is an attractive storage option for the budget-conscious, but costs can quickly add up if you need to use a large number of discs to back up all of your data.**



**Western Digital's Passport Essential line of external hard drives features a stylish, portable design and is available in large storage capacities.**

PC, because the drives are available in storage capacities similar to or greater than your PC's internal hard drive. Most external hard drives also offer a portable design, so you can take the drive to a relative or friend's house and copy all of your photos or movies onto their PC. If you don't already have an application to automatically back up your PC, consider investing in a model that offers a backup tool to save yourself a shopping trip.

### Network-Attached Storage

If you have a home network, you have the ability to share an Internet connection, files, and other peripherals, such as a printer. NAS is a small unit with a hard drive (or multiple hard drives) and a network adapter, so you can share the storage with all the computers on your home network. Besides

acting as a central repository for the files you want to share, the various computers on your home network can automatically back up data to the NAS device. For instance, the LinkStation EZ LS-CL (prices vary by capacity; [www.buffalotech.com](http://www.buffalotech.com)) includes Buffalo's Navigator software to instruct you how to set up the NAS on your home network, and it includes a free 30-day trial of Memeo Auto-Backup software.

In terms of storage capacity, most NAS devices are offered in 500GB, 1TB, and 1.5TB sizes. Alternatively, if you have an extra hard drive or two lying around, you can purchase an NAS enclosure, such as the MobileNAS MN2L (\$240; [www.sansdigital.com](http://www.sansdigital.com)) from Sans Digital, and install your hard drives into the NAS. For example, the MobileNAS MN2L features two bays for SATA hard drives, and it offers a maximum capacity of 2TB. Many NAS enclosures, including the MobileNAS MN2L, allow you to set up the drives in a RAID (redundant array of independent disks) configuration. The MobileNAS MN2L supports RAID 0 (increases performance) or RAID 1 (creates a redundant copy of your data to protect your data if one drive fails).

NAS is ideal for those who have multiple computers connected to a home network. Once you set up the NAS device, it requires little effort to maintain and operate. After connecting it to your network via Ethernet cable, you'll only need to map the network drive on your PCs or use the software included with your NAS to set up the network share for each



**With Clickfree's Automatic Backup drives, you only need to plug in the drive to back up the data on your PC.**

PC. In comparison to the other external storage methods we have covered, the primary downside to NAS devices is that you can't easily transport and use the storage. However, we should note that some NAS devices offer an FTP (File Transfer Protocol) feature, so you can remotely upload and exchange files over the Web.

### Time To Archive

Once you've chosen a storage medium that works best for you, don't forget to regularly back up your data. If you're looking for software to help you automate your backups, check out our software roundup on page 54. With the addition of helpful software, you can easily ensure that your data archives are always up-to-date. ■

BY NATHAN LAKE

## Did You Really Back Up?

**W**hen you use an application to burn files onto disc or select and copy files to an external drive, it's fairly easy to see if your backup was successfully transferred. But if you rely on an automatic backup application, it's wise to occasionally check that your backup files are current. To do so, open up Windows Explorer and select the drive letter for your chosen storage device. With a CD or DVD, you'll need to select your optical drive, while an external hard drive or USB flash drive will appear as a separate drive on your PC. For an NAS, you'll have to open the mapped network drive. Double-click the folder where the files are located, mouse over a file, and the pop-up window will list the last time the file was modified. ■

**The Buffalo LinkStation EZ LS-CL features software to let you store and share your files in four simple steps.**





# BACKUP SOFTWARE

## Automatically Archive Your Data

**H**ow often do you back up the data on your PC? If the answer is once a year or even every month, a system crash may still result in the loss of your most recently added photos, music, videos, documents, and email. The best way to avoid losing your data is the use of a backup application that, on a daily basis, creates a copy of your entire hard drive or recently updated files. Many backup applications also include a way for you to restore the files and your OS (operating system), should something go wrong. In this article, we'll examine several popular data backup programs and cover the primary features of each application.

### Drive Backup 9.0 Personal

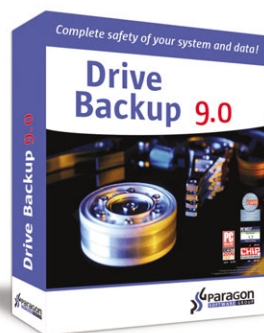
Paragon Software | \$39.95  
[www.paragon-software.com](http://www.paragon-software.com)

Like many other backup tools, Paragon Software's Drive Backup 9.0 Personal lets you create an image of your hard drive (with Windows OS files) onto disc, an external or network storage location, or secondary hard

drive on your PC. You can use the hard drive image to restore your PC with all the applications, user preferences, settings, and files that were on your PC when the backup was created. But rather than requiring you to reinstall Windows and install Drive

transfer incremental backups, so you'll always archive the most current file version.

Another handy feature of Drive Backup 9.0 is that it offers an image browser feature that lets you view individual, backed up files and folders



Drive Backup 9.0 Personal



True Image Home 2009

Backup 9.0 before restoring your PC, the application lets you use a bootable USB flash drive or CD and begin the restoration process by simply booting your PC via the backup media.

In terms of usability, Drive Backup 9.0 Personal edition offers a task pane on the left-hand side that allows you to quickly select the task you want to perform. The application's built-in scheduler allows you to configure Drive Backup 9.0 to automatically back up specific files and folders, clone the PC's hard drive, or even restore the computer to a previous state. Version 9.0 includes a file-level protection feature that prevents the overwriting of old versions of emails, Outlook content, photos, music, videos, and Microsoft Office files. And, unlike some other backup programs, Drive Backup 9.0 Personal can copy currently open files and

and make selective choices about the files you want to restore.

### True Image Home 2009

Acronis | \$49.99  
[www.acronis.com](http://www.acronis.com)

If you've ever avoided updating an application or device driver because you were afraid the new version may not work as well as your current software, you'll appreciate the Try&Decide feature of Acronis True Image Home 2009. The backup application lets you put the PC into a test mode where installations and changes are not applied to the hard drive directly. Thus, you can try out any changes before implementation. Acronis True Image Home 2009 allows you to create disk images and specify files or folders to back up, and you can set up the software to automatically run at a preset time, at startup, or when you shut down your





computer. It's also possible to configure True Image Home 2009 to back up your PC as soon as you attach an external hard drive.

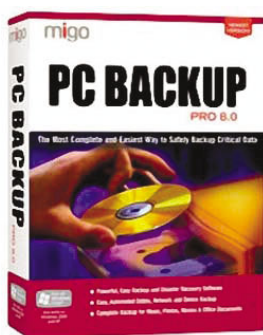
To help you locate archived files, True Image Home 2009 lets you search for a file name using Windows Explorer or the Google Desktop search tool. PC users familiar with Vista will enjoy that True Image Home 2009 offers a similar interface with icons and links for each of the program features. Because regular backups to an external or network hard drive can quickly fill up your storage devices, True Image Home 2009 lets you consolidate an

encrypt the backed-up data, which is ideal if you need to archive sensitive financial and work files.

PC Backup Pro 8.0 lets you schedule full, partial, or incremental backups, and you can use the application's File Verification feature to ensure that your files weren't corrupted during the backup process. PC Backup Pro can also archive incremental- and differential-based files, and by keeping the older file versions, you can restore a document, spreadsheet, or photo to a previous state. PC Backup Pro includes wizard-based guides for each type of backup, and we're glad that the application

including the system files, programs, documents, and system settings. You can use the Disaster Recovery tool to fix Windows if the OS becomes unstable or inoperable.

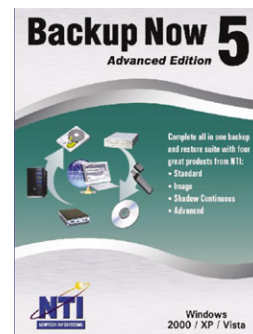
When it comes to choosing where to back up your data, Backup Manager Home 8.0 lets you use nearly every option available. You can use external or internal hard drives, a network storage location, USB flash drive, disc (CD/DVD/Blu-ray), remote locations via FTP (File Transfer Protocol), or use Genie-Soft's online service. (Note that Genie-Soft's Online Backup service is a separate, fee-based service.) When you



PC Backup Pro 8.0



Genie Backup Manager Home 8.0



Backup Now 5 Advanced Edition

older, complete archive with your incremental backups and save storage space. As an added bonus, True Image Home 2009 also includes a migration tool, so you can clone your PC onto another hard drive or new PC.

### PC Backup Pro 8.0

Migo Software | \$59.99  
[www.migosoftware.com](http://www.migosoftware.com)

Computer viruses and spyware have a nasty way of sticking to the files on your computer, and when you're backing up your data, you'll want to ensure that you don't archive infected files. PC Backup Pro 8.0 from Migo Software includes a virus scanning tool that helps remove viruses from the files you choose to back up. Additionally, PC Backup Pro 8.0 includes a compression tool that lets you reduce the amount of storage space your backups will consume. You can also choose to

provides file selection filters to help you select the files you'd like to restore.

### Genie Backup Manager Home 8.0

Genie-Soft | \$49.95  
[www.genie-soft.com](http://www.genie-soft.com)

Genie Backup Manager Home 8.0 is a complete backup and restore application that includes a number of advanced features not commonly found in other backup programs. For instance, Genie-Soft's Web site offers free plugins that allow Backup Manager Home 8.0 to back up the files and settings associated with your applications. With your personal application settings backed up, you can uninstall and reinstall a program that's experiencing problems without needing to manually reconfigure all your application settings. Additionally, Backup Manager Home 8.0 includes a Disaster Recovery feature that backs up your Windows OS,

first run Genie Backup Manager Home 8.0, it will back up all the files and folders you select, and after the initial backup, you can choose to copy the same set of files or only new or changed files. If you need to save space, you can opt to delete old backups and automatically purge data after a given number of days. Besides a full feature set, Genie Backup Manager Home 8.0 offers a simple interface and wizard-based guides and help tools, so you can create and restore your data backups with ease.

### Backup Now 5 Advanced Edition

NTI | \$69.99  
[www.ntius.com](http://www.ntius.com)

Although most backup applications are fairly easy to use, NTI's Backup Now 5 is one of the most intuitively designed backup applications we've seen. For instance, Backup Now 5 provides you a set of numbered steps on

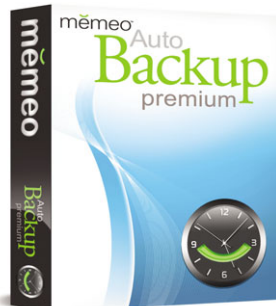
the left-hand side of the window, and if you need to make a change, you can jump back to any step in the process. We also like that Backup Now 5 includes brief, helpful hints about the choices available and the important aspects to consider before you reach the next step.

NTI Backup Now 5 lets you archive complete images of your hard drive, as well as create file-based backups. You have complete control over the compression level, type of encryption used, and file verification settings. We like that you can tailor the process to suit your personal needs and time requirements. Another good example of the program's flexible design is the application's ability to shut down, enter hibernation, or initiate standby mode after the completion of a backup. The automatic power-down feature is ideal for those who prefer to run the backup process when they're not using the PC to avoid any system slowdowns.

We like that NTI Backup Now 5 can be run on more than one PC, rather than some backup applications that

## Did You Really Back Up?

**M**ost backup software creates a catalog of backup files and typically lists whether the archive is a full or incremental backup to help you determine which file set you want to restore. Although each application is different, when you run the restore function, the program will list the date, time, and type of backup that was run. If you want to check whether your file backup was successful, many backup programs include some type of data verification tool, which will also help ensure that no errors occurred during the backup process. ■



AutoBackup Premium

limit the software's use to one system. You can also use NTI Backup Now 5 to clone your personal files from one PC to another.

### AutoBackup Premium

Memeo | \$69.95

[www.memeo.com](http://www.memeo.com)

When performing file-based backups, most backup applications include a file selection tool to help you locate essential, personal files on your PC. However, if you don't store critical files in common folder locations, such as the Documents folder in Vista or the My Documents folder in WinXP, the backup application may not automatically archive the file. Memeo AutoBackup Premium includes a SmartTags feature that runs as a Windows Explorer plug-in and lets you add files to the program's backup

set that you may not have initially included. Memeo AutoBackup Premium can also reference the backup tag title to let you select just a group of SmartTags files.

Although AutoBackup can't create an image of your PC's hard drive, the application does an excellent, speedy job of archiving your data files. We also like that AutoBackup remembers the hard drive location of the files, so you can restore a deleted file to its original folder. Memeo AutoBackup Premium is also one of the few backup tools that lets you back up data to multiple locations at the same time. For instance, you could simultaneously transfer files to an external hard drive and a network file server.

### Choose A Backup Plan

All of the applications we examined in this article offer free trials, so it's a good idea to test the different applications before you purchase. When you try the software, consider whether the program provides all the functions you need, such as the ability to make incremental archives or create an image of your hard drive that lets you restore your PC to a previous state. ■

BY NATHAN LAKE

## Diskeeper Undelete 2009

If you accidentally delete an important file, you could restore your files using your backup software—but doing so may have some unintended consequences, such as overwriting recently updated files. The Windows Recycle Bin keeps some of your files, but if the file has been overwritten or is exceptionally large, Recycle Bin won't retain a copy of the file. Diskeeper's Undelete 2009 (\$29.95; [www.undelete.com](http://www.undelete.com)) replaces the Windows Recycle Bin with Diskeeper's Recovery Bin to let you access and restore all of your deleted and overwritten files.

To help you locate deleted files, Undelete 2009 includes a search tool to let you find and recover the files you need. The recovery program also lets you roll back a file, such as a document or spreadsheet, to an earlier saved version, so you can quickly load an older version. Because you may not know which file version is the one you want, Undelete 2009 features the ability to preview the content, so you'll know that you're restoring the correct version. For file security, Undelete 2009 provides SecureDelete 2.0, which is a feature that purges files using a technique developed for the National Security Agency and the Department of Defense. ■



# ONLINE BACKUP OPTIONS

## Services For Safeguarding Important Data

**O**nline backup services are continually springing up and growing all across the Internet. Because we rely on the production, interconnection, and preservation of digital information, protecting data is more important than ever before.

Even if you only engage in casual computing, you undoubtedly want to save (and safeguard) your digital photos, videos, or sensitive documents that you would like to preserve for future access. More importantly, fires, floods, and theft are realities you can't overlook. Even if you've backed up your data on an external drive, it's plausible that it might get lost inside disaster rubble, or a thief could swipe it along with your PC. For these reasons, an online backup service is an attractive backup option.

Instead of storing your backup photos in a standard photo album or saving videos to writeable discs, you can transfer your digital media and documents to an online database that's remote and secure. For added security, backup services encrypt saved data so that no one but you can access your personal backed up information. You may also have the option to choose a private code to protect your files.

We've compiled a list of various online backup service options, some of which will appeal to the business-minded, while others are more tailored for personal use. Maybe you are looking for more security than a flash drive or an external hard drive. Those types of devices will surely back up your personal data, but everyone must consider the risk of misplacing a small thumb drive or damaging backup CDs.

### First On The List

Regardless of the backup service you choose, there are a few important reminders you won't want to shrug off—particularly when we're talking about saving large amounts of personal data. One determining factor when deciding upon a backup service should be the operating system; if the service doesn't support your current OS, then you can obviously rule it out. For instance, you might run Windows Vista on your desktop, but you operate with Mac OS X Leopard on your MacBook Air. Consequently, you'll want to look for a backup solution that will support each OS if you want to utilize the same backup service on both systems.

Every service should list how much space it offers: You might be limited by a monthly or annual time frame or allowed to increase your gigabytes with a few more dollars. You may want to do some math before you decide what type of backup plan you want to invest in.

For example, it would be wise to figure out what records are worth saving out of certain folders and files. Some plans offer up to 5GB of free storage, so be sure to take advantage of that space if you don't have many files to back up. After that, you can most likely secure the rest of your information with a month's worth of gigabytes (usually under 20GB). If you know you'll be performing a large-scale backup, then you may want to opt for a service that provides a higher storage limit each month, such as 30GB.

### Carbonite Online Backup

Unlimited storage; \$49.95 per year  
[www.carbonite.com](http://www.carbonite.com)

Whenever your PC is connected to the Internet, Carbonite's Online Backup continuously protects and backs up photos, music files, documents, email, and other valuable data. Carbonite seamlessly assimilates into your Desktop and searches for data in the background without disturbing your computing habits. During the time when you aren't using your PC, Carbonite backs up recently altered or brand-new files.

In the event of a serious data loss, you can recover and restore your files by double-clicking the Carbonite Desktop icon, locating the appropriate backed up item, and right-clicking and selecting Restore. In the case of a lost or stolen laptop, recovering data is as simple as logging on to Carbonite's Web site. The length of your data restoration depends on the amount of information you need to restore. With a standard DSL (Digital Subscriber Line) connection, Carbonite approximates that you can download 14 to 18GB per day.





## IDrive

2GB free

150GB; \$4.95 per month,

\$49.50 per year

[www.idrive.com](http://www.idrive.com)

IDrive Online Backup Classic from Pro Softnet is designed for Windows operating system. Using an interface that mimics Windows Explorer, IDrive Classic lets you schedule data backups for your Desktop, documents, pictures, videos, and music. This version also includes features such as mapped drive backup and auto-pause. When you log out of your user account, IDrive will resume the backup process of previously mapped drives. While you're actively using the Desktop, the auto-pause option detects the best time to resume backup without disrupting your "workspace."

When enabled, IDrive implements continuous data protection by backing up minimally modified files and folders in 10-minute increments. Conversely, IDrive backs up more sizable data during regularly scheduled backups. Restoring the latest version of a file is not difficult. First, click the Restore tab and choose a file or files to restore. Next, click the Restore Now button. Finally, select the restore destination on your PC.

Attention Mac users: You can download IDrive for Mac, which uses a drag-and-drop feature for backup and restoration (compatible with Mac OS X Tiger or later). Pricing for IDrive Pro is categorized by Personal Use and Business. Business users can purchase 50GB, 100GB, or 500GB of storage space for a monthly or yearly rate.

## MozyHome

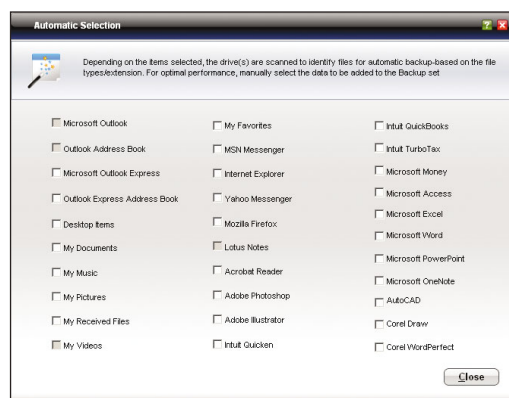
2GB free

Unlimited storage; \$4.95 per month,

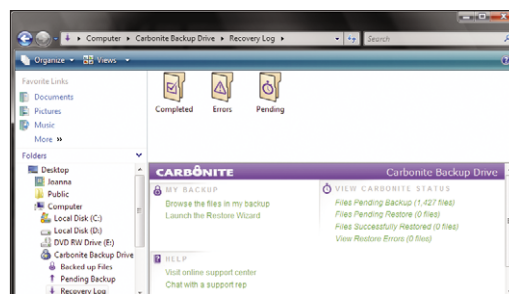
\$54.45 per year

[www.mozy.com](http://www.mozy.com)

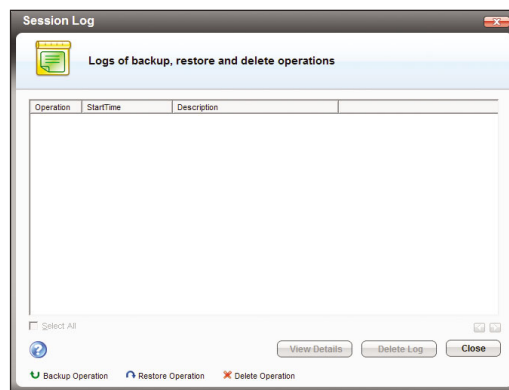
Compared to the other services featured in our roundup, MozyHome



**IBackup's Automatic Selection feature lets you choose which items you want to prepare for backup.**



**Carbonite is easy to use because you can view completed and pending backups in Windows Explorer.**



**The IDrive Session Log shows details of backup, restore, and delete operations performed during the current session.**

from Mozy is the easiest to install and start up. You'll sign up for an account, download MozyHome with a few clicks, and choose your method of backup—whether you safeguard your entire local drive or manually select a particular document.

It may take quite a few hours (or days) to complete an initial backup

based on the size or quantity of items you're attempting to upload. The Enable Bandwidth Throttle feature lets you increase or decrease how much you're using your Internet connection during backups.

Once you really investigate the program, you'll find that the scheduling options can be tweaked very specifically, which is great if you're a frequent home PC user. You can choose to customize the Automatic Parameters or configure a strategically scheduled backup at a specific day and time.

Mozy doesn't hold back on its security: The 448-bit Blowfish encryption ensures that your sensitive data will be protected from malicious intruders. The service also uses block-level (incremental) backup for speeding up successive backups.

## IBackup

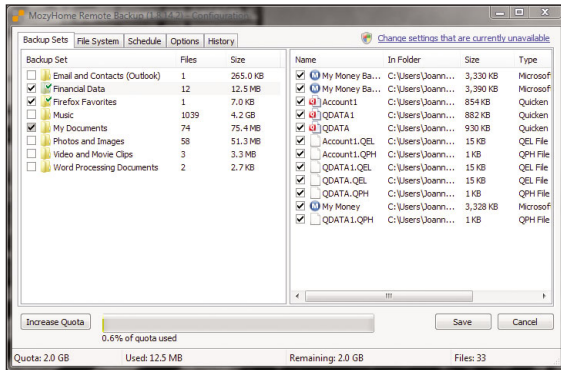
Economy Plan starts at 10GB; \$9.95 per month, \$99.50 per year

[www.ibackup.com](http://www.ibackup.com)

If you like the user-friendly interface of IDrive, then you won't have any trouble using IBackup. This service has a host of backup offerings; in fact, there are 12 to be exact. To start, you can download either IBackup for Windows or IBackup for Mac. The Windows service backs up vital data such as Outlook, Outlook Express, My Documents, and Office files with System State Backup wizards. One of the key features in the Mac service is data compression,

which enables faster backups that take up less storage space.

If you run Linux or Unix, there's a version of IBackup for you, as well. IBackup for Unix- and Linux-based systems involves a utility called rsync. This rapid incremental transfer reduces the number of resources used with backing up changes you've made



MozyHome provides a clearly decipherable interface where your backup selections reside in the left pane and your newly backed up items are visible on the right.

to your files. The remaining backup options include hard drive and Web folder backup, in addition to business-end backup for Microsoft Exchange Server.

There are two restoration methods in IBackup—both are relatively simple. The basic method includes

selecting files in your IBackup account and clicking Restore. You can also drag a file or folder from My IBackup to My Files.

## VMN Storage

1GB free  
15GB; \$9.95 per month,  
\$119.40 per year  
storage.vmn.net

VMN Storage from Visicom Media is another standard service that does what it says: backs up and protects your files.

This includes multimedia, of course, including photos, video, and music. Comparable to a few of the other storage solutions we've mentioned, VMN Storage lets you start with a little bit of free space.

The unique features VMN Storage has to offer are its organization and management characteristics. For instance, before you back up a photo (using the drag-and-drop method), you can right-click and select Preview to check your image file. The Viewer tab is another preview option, as well. When you click the Manager icon, you can view the Queue, which lets you view items that are currently in transit to the backup. If you select the Log tab, you'll see a record of all transfer

and backup activity; this is convenient for double-checking your recent backups.

VMN Storage assures users that all data is highly controlled and kept confidential. It even goes as far as executing automatic Internet and external backups for additional safeguarding. Internally, VMN Storage moderates human access through biometric authentication and video surveillance.

## Time To Use The Backup Plan

You can't predict what could happen to your PC. Computers are never immune to an unforeseen crash or a malicious virus, so you can never be too cautious when it comes to preserving the valuable items on your hard drive.

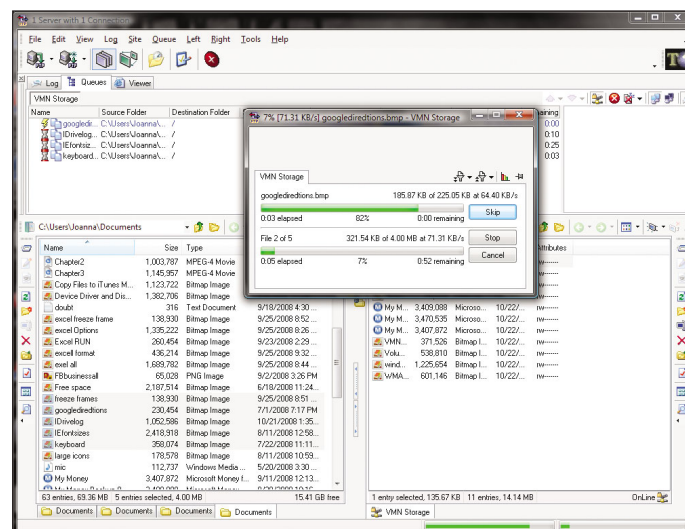
Bear in mind that backup services enable you to restore files, folders, and other data to a new or different PC if a local disaster forces you to leave your system behind. In light of what we've introduced, you have every reason to start backing up your PC today. We want you to practice safe and secure computing, so be sure to back up before it's too late. ■

BY JOANNA SAFFORD

## Did You Really Back Up?

**B**ecause online backup services are supposed to provide peace of mind, you won't have to hem and haw about where your data has gone thanks to the secure databases. If you want to check or restore your saved data, you'll need to access your backup account online through the designated login Web site.

Each service should inform you of one or more of the following actions: what type of data you backed up, when you backed up your data, and how much storage you have remaining. You may have to get more comfortable with using your backup service before you can swiftly move about the site to check all the necessary backup statistics. ■



VMN Storage provides a moment-by-moment update of your backup. Pending data is displayed clearly on the Queues tab.



# VISTA BACKUP & RESTORE CENTER

## Set It & Forget It

up, but it's impossible to do with Backup And Restore.

application, or will Windows Vista's built-in Backup And Restore Center do the trick?

### The Good & The Bad

What's nice about Vista's Backup And Restore Center is that it's very simple to use. Every available option for both backing up and restoring files in Vista is available from one window. The fact that it's built into the operating system is also a plus. Unlike using a third-party backup program, Vista's Backup And Restore doesn't cost anything extra, and you don't have to worry about whether the software is supported and up-to-date. As long as you have Windows' Automatic Updates enabled, this software will continue to work as it should.

Users may find, however, that the Backup And Restore Center is too

**T**here's no need to convince people that they ought to back up their data. Virtually every computer user understands the concept that having a file or folder on a computer that isn't backed up is unwise. Unexpected things happen to computers, even if you're careful with your equipment and diligent about keeping your machine free of malware. Drops, hardware malfunctions, and even the occasional software glitch are a few examples of things that can go awry with your computer and could cost you some or all of your data.

The question that remains, though, is how best to go about making and storing backups. What software is best? Should you spring for a third-party

**Unexpected things happen to computers, even if you're careful with your equipment and diligent about keeping your machine free of malware.**

simplicistic and limited compared to third-party backup software. You can only specify types of files to back up (such as photos or videos) instead of being able to back up specific files and folders. For example, say you have a folder where you save projects for work, but it contains many file types, such as Word documents, Excel spreadsheets, and images. It would benefit you to automatically back up that folder every day. With some third-party programs, that would be easy to set

### Why Use It?

Despite lacking some useful customization features, Backup And Restore is a terrific application for those who don't need a multifaceted backup solution. If you're not concerned about backing up specific items, it's very simple to set up automatic backups and then let the utility do all the work for you.

Further, it's a fairly elegant way to create a **disk image** (a "snapshot" of your entire system that you can use to restore your computer) in case of a disaster. Using the built-in Backup And Restore Center option also means that you don't have to find a third-party application. Even tracking down a good backup application that is free requires time.

There are two primary features of Backup And Restore Center: Automatic File Backup and Complete PC Backup. Automatic File Backup backs up files, while Complete PC Backup covers everything on your system, including data, the operating system, and even your applications.

Be aware that Vista Home Basic and Home Premium have Automatic File Backup capabilities but not Complete PC Backup. If you want the whole package, you need to be running Vista Business or Ultimate editions.

### Back Up

There are a few ways you can go about backing up and restoring your files with Vista's Backup And Restore Center. Namely, you can back up different types of files, or you can back up your whole computer, creating a restore point.





First, navigate to the Backup And Restore Center by clicking Start, Control Panel, and System And Maintenance. Click Backup And Restore Center and go to work.

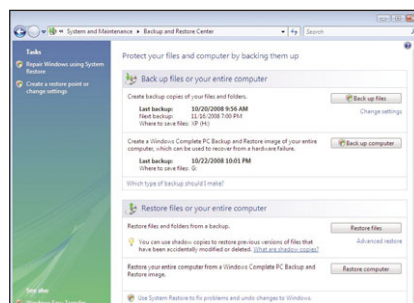
To back up specific types of files, click Back Up Files under the Back Up Files Or Your Entire Computer heading. Vista will automatically search for and display any and all possible backup storage options connected to or inserted in your computer. This includes CDs, DVDs, external hard drives, and even other partitions on the same hard drive on which Vista is installed. On this same screen, you can also select the On A Network radio button and click Browse to back up to a network folder.

Make your selection and click Next. Select which disks you want to include in the backup (if you have multiple hard drives or partitions) and click Next. On the next screen, choose which types of files you want to back up; for example, you can select Pictures, Music, Email, Documents, and more. Check the box next to each type of file you want to include in the backup and click Next.

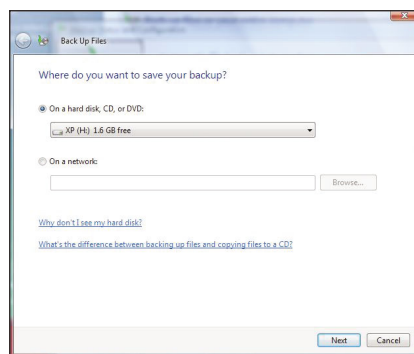
The next screen will ask you how often you want to create a backup. Using the drop-down menus, you can select how often (daily, weekly, or monthly), as well as the day and time. (NOTE: The first time you create a backup in Vista, it will automatically make a full backup of your files and folders.) When you have set the parameters accordingly, click Save Settings And Start Backup. This could take a while the first time you run it because it will be backing up all of your files. In subsequent backups, it will only be backing up new files or changes you made to old files, so it shouldn't take as long.

Vista will automatically make a copy of your files. When the process is complete, note that the date of your last backup is displayed, as well as the date of your next backup under the Back Up Files Or Your Entire Computer heading in the Backup And Restore Center window.

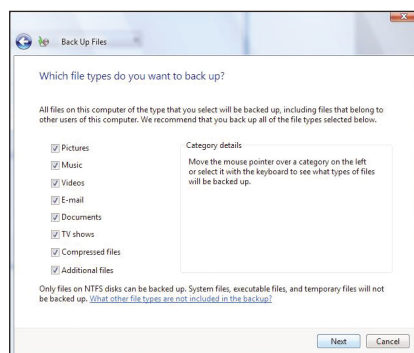
You can also perform a total backup of your computer, which includes Registry settings, program files, and even items such as temporary files and profile settings. This is what is commonly called a disk image. To make a disk image, click Back Up Computer in the Backup And Restore Center window.



**Users can perform any and all tasks built into Windows Vista's Backup And Restore Center from one convenient window.**



**When you create settings for present and future backups, you can choose to back up to a hard disk, CD, DVD, or a network drive.**



**You can choose to back up all your files, or you can specify certain file types to back up.**

Select a place to save the image. For a complete backup such as this, you need to use a partition or hard drive with a good deal of space because these disk images are very large. You can also back up onto multiple DVDs, but that can be problematic because you may easily need a dozen or more DVDs to complete the whole job. This would make it a tedious task, as you'd have to sit there and swap out each disc as it was filled up. Then you'd have a big stack of DVDs to keep track of, not to mention the tedium of using the discs to restore your computer if the need arises.

Select either On A Hard Disk or On One Or More DVDs and then click Next to advance to the next screen. Make sure the correct drive you want to back up is selected on the next screen and click Next. Click Start Backup to perform the task.

## Restore

The Restore function of the Backup And Restore Center offers more options for working with specific files and folders. Suppose you want to restore a folder containing photos from a family vacation. Click Restore Files under the Restore Files On Your Entire Computer heading. When the window appears, be sure the Files From The Latest Backup radio button is selected and click Next. On the next screen, click Add Files (or Add Folders) to search for the files you want to restore. Locate the files you want to restore; conveniently, you can click and drag to highlight multiple files to add at once. When you've made your selections, click Add. When the window closes, click Next.

On the next screen, choose where to save the restored files. You can either choose In The Original Location or In The Following Location. If you choose the latter, click Browse to select the location where the restored files will go. When you're finished making your selections, click Start Restore.

If a copy of the original file still exists in your chosen location, you'll receive a prompt at this time asking if you want to replace the old file with the new one (Copy And Replace), if you want to cancel the restore (Don't Copy), or copy the new file anyway and give it a slightly different name (Copy, But Keep Both Files). You'll see a message indicating that the restore was successful (or that it was canceled, if that was your choice). Click Finish to close the window.

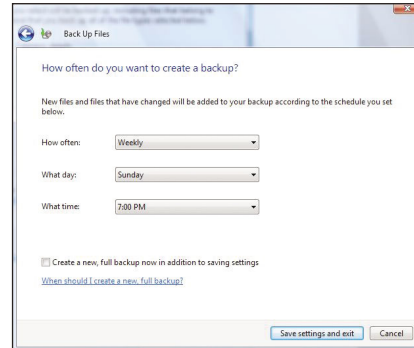
## Did You Really Back Up?

**Y**ou may want to check to be sure the backup you performed actually backed up your files or made a restore point for your system. You can check for when your last backup was performed under the Back Up Files Or Your Entire Computer heading on the Backup And Restore Center window. Next to Last Backup, there will be a date and time listed; this is the last time a backup occurred. Beneath that is Next Backup, which tells you when the next scheduled backup will happen.

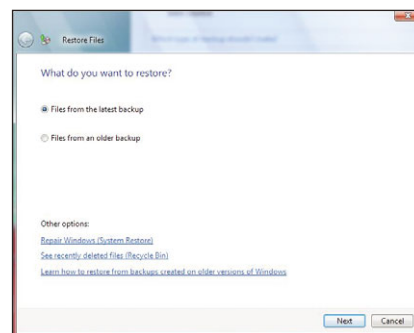
If you're still not convinced the backup was a success, you can simply look for your backed up files on whatever media you used. If you used DVDs, for example, just pop one into your optical drive and check for the files. The same goes for, say, an external drive—view the files on the device and check to see that the date matches the date of your last backup.

If you back up to overwrite certain files, navigate to one of those files, right-click it, and select Properties to see the date on which the last overwrite took place. ■

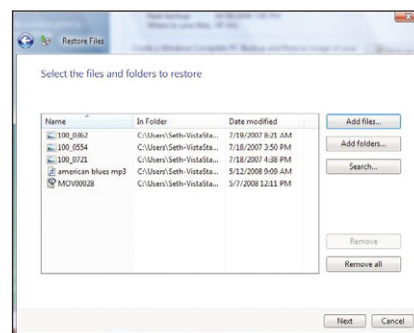
Under Restore Files in the Backup And Restore Center window, you can click Advanced Restore for more options. When the window pops up, click Advanced Restore. The next screen will give you three options for restoring files: from the last backup made on your computer, an earlier backup made on your computer, or



**Being able to set the frequency, day, and time for automatic backups is a terrific feature of Vista's Backup And Restore Center.**



**When you want to restore your computer, you can do so from any of the saved backups, not just the most recent one.**



**You can restore specific files, adding them to the queue individually or in large chunks.**

from a backup made on a different computer. Select the appropriate radio button and click Next.

If you choose the first option, the steps for restoring files are the same as outlined above. If you choose to restore files from an earlier backup, you can select from any of the previous backups on the next screen. Make your selection and click Next. The subsequent steps are the same as above.

If you elect to restore files from a backup made on a different computer, you'll select the location of the device on the next screen. When you've selected the source of the backup, click Next. Select the correct backup from the list on the next screen and click Next. Then, follow the same steps as above.

If you want to restore your entire computer, you must be very careful; the point of a disk image is that it is a record of the state of the *entire* computer. If you restore it, it will replace any changes you made since that backup was made. You should only use this feature if your computer has had a serious problem from which it can only recover by being rolled back to a previous date.

To use this function, click Use System Restore To Fix Problems And Undo Changes To Windows at the bottom of the Restore Files Or Your Entire Computer heading. When the Restore System Files And Settings window appears, click Next. On the next screen, select the most recent restore point (or whichever one is the last known good restore point) and click Next. On the Confirm Disks To Restore screen, be sure you have the correct drive selected and click Next. Click Finish on the next screen to complete the restoration.

If you're into free and easy-to-use applications and don't mind the lack of features, Vista's Backup And Restore Center will be fine for you. Otherwise, consider a more full-featured backup and restore application. ■

BY SETH COLANER



# RECOVERY SOFTWARE & SERVICES

## Lost, But Not Gone Forever

**Y**ou've spent hours organizing and labeling your digital photo collection and can hardly believe how many great pictures you've taken and stored on your hard drive. It goes without saying, then, that when your hard drive fails, it's a catastrophic event. If you should face such a disaster and haven't backed up your data in another location, don't fret. There are several data recovery options that can help you get back your most important files.

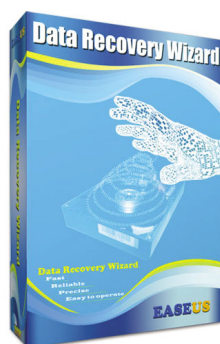
### Recovery Software

There are numerous recovery software packages available, and most have the same basic functions of retrieving and saving data. Below, we've highlighted three software packages that may help you rescue your lost files, without causing you a headache in the process.

**GetData Recover My Files.** This software promises to recover data from several storage devices, including hard drives, memory cards, USB flash drives, and floppy diskettes. Recover My Files' main purpose is to recover data from a hard drive that has crashed. But you can also use Recover My Files if you've deleted items and emptied them from the Recycle Bin, or if you accidentally format your hard drive, erasing everything that was stored. You can try Recover My Files by navigating to [www.recovermyfiles.com](http://www.recovermyfiles.com) and clicking Download And Try Recover My Files

Software Free (found in the center of the page). With the free trial, you can locate and review your recoverable files, but you must purchase the software to actually recover them. You can purchase Recover My Files as a download for \$59.95 and receive the software on a CD for an additional \$14.95.

**Easeus Data Recovery Wizard.** This software has an easy-to-use interface and several options to make file searching and recovery a simple task. You can search for files and recover specific items by right-clicking them, resuming the last recovery results, and previewing recovery files in thumbnail form. In addition to recovering files from most storage devices, such as hard drives, USB flash drives, and camera memory cards, Data Recovery Wizard can recover files on your iPod or other digital audio player. This software can create a disk image file and recover compressed and encrypted files on drives with an NTFS (NT File System) volume. You can test drive Data Recovery Wizard by downloading the free demo version from [www.easeus.com](http://www.easeus.com) and choosing Download in the Data Recovery Wizard section. The demo will scan your failed drive and display the data that can be recovered. To recover the



**Easeus' Data Recovery Wizard can recover your hard drive if it crashes or simply recover files you've accidentally removed from the Recycle Bin.**

files, you must purchase the software for \$69.95. To do so, visit the site and choose Buy Now in the Data Recovery Wizard section.

**Migo Digital Rescue Premium.** Like other data recovery software, Migo Digital Rescue can

recover files from a number of storage devices. But it can also rescue your email, with support for Outlook, Outlook Express, Windows Mail, and Thunderbird email programs. It can even restore your task lists, notes, and calendar entries. Migo Digital Rescue is easy to use, with the ability to search for files by name, type, file extension, and more. You can preview files before you actually recover them, and you can recover multiple files at the same time. Migo Digital Rescue is available at [www.migosoftware.com](http://www.migosoftware.com) for \$49.99 as a CD or as a download. But before you buy, you can try out the software by clicking the Downloads tab and choosing Try Now in the Recover Lost Data section.

### Recovery Services

Using data recovery software may not always be enough to salvage your files. You may need the help of a professional to bring your pictures, music, and other documents back to life. We cover some options for when you need a little extra help rescuing your files.

**Geek Squad Data Recovery.** Geek Squad services are some of the most familiar computer services available and can be found at your local





Best Buy store or online at [www.geeksquad.com](http://www.geeksquad.com). When you take your hard drive to the Geek Squad experts, they will first check your drive to be sure that your data can be retrieved (this original assessment will cost you \$59). Once the Geek Squad determines that the data can be recovered (according to Geek Squad, data is recoverable 99% of the time), it will then send your drive to the main Geek Squad location where the tech Agents will work to reclaim your data. The Geek Squad experts can recover data from internal and external hard drives, floppy diskettes, tapes, CDs, and memory cards. Pricing starts at \$259, depending on the complexity of the recovery process. The Geek Squad site states that there is no exact time period for the recovery process, but that you'll receive phone calls to keep you up-to-date on the process of your hard drive's recovery.

**Ontrack Data Recovery.** This service offers many options for you to recover your most important files. To start, you can set up a free consultation with

Ontrack to determine your best solution and to get a price quote. Some of the service options include Remote Services, in which your data recovery is performed through a remote connection to your computer; Cleanroom Services, where your data is recovered in a secure Ontrack cleanroom lab; and Onsite Services, in which data recovery is performed at your location by the Ontrack engineers. After your consultation, Ontrack will evaluate your drive and let you see all your recoverable files before you actually recover them. If you choose to proceed with the service, Ontrack will begin working on your drive, and you can track the progress online. You will receive your recovered data on a storage media of your choice, such as a CD, DVD, external hard drive, etc. Ontrack also offers

laptop, email, mobile device, and operating system recovery. For a complete list of Ontrack's services, visit its site at [www.ontrackdatarecovery.com](http://www.ontrackdatarecovery.com).

**SalvageData.** SalvageData is another professional recovery service that can help you rescue your lost data. SalvageData is much like the other services we've mentioned and can recover hard drives that have suffered injury from corruption, virus infection, physical damage, or natural disasters. SalvageData can accommodate all types of hard drives, including internal IDE

(Integrated Drive Electronics), ATA (Advanced Technology Attachment), and SATA (Serial ATA) drives. SalvageData's process is simple: Send in your hard drive for evaluation and receive a price quote. SalvageData engineers will then use special tools and materials to recover your data. In addition to hard drives, SalvageData also offers data recovery services for MP3 players, memory cards, and PDAs (personal digital assistants). SalvageData also offers software that you can try before you buy. Just visit [www.salvagedata.com](http://www.salvagedata.com), click Recovery Software in the menu bar, and download the trial for the software of your choice.

### Lost & Found

Unexpected hard drive failure is an event that none of us wants to face, so it's a good idea to prevent data loss by backing up your data to an external hard drive or DVD. But despite our best efforts, data loss can still occur, and it's reassuring to know that there's still hope for your hard drive. ■

BY KRIS GLASER



**GetData's Recover My Files** can rescue your files even if you format or delete a partition on your hard drive.

## The Cost Of Procrastination

Just because you can use recovery software or a recovery service to reclaim lost data doesn't mean you should rely on these methods. Preventing data loss by purchasing an external hard drive or by storing your files online can be more cost-effective in the long run—for both the protection of your data and your wallet. Below, you can compare the estimated costs of backing up your data vs. trying to recover it from a failed hard drive.



You can save money by taking preventative measures to protect your data. For example, backing up your files on a 250GB external hard drive would cost about \$120, and using an online data backup service would only cost \$5 to \$10 a month. Compare that with the cost of professional data recovery, which can easily exceed \$300.

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# Microsoft PowerPoint 2007

## Choose The Right View

Presentation

Beginner

WinXP/Vista

As with photographers and architects, PowerPoint users know something about their work: It looks different from different vantage points. Although you may create slideshows on a screen a few inches away, PowerPoint's various available views help you see your work a new way.

The most basic view change is zooming in and out from slides. If you're not in the habit of changing scales while designing, you'll probably be surprised at the perspective you get from zooming out and the control you get from zooming in on things such as objects you're trying to align. To quickly change perspectives, use the zoom controls in the bottom-right corner of the PowerPoint window. Drag the slider right to zoom in and left to zoom out. The plus and minus buttons let you zoom in or out 10% at a time. When you're zoomed in tightly on a small part of a slide and need to step back for an overview, use the Fit Slide To Current Window button in the bottom-right corner to put the entire slide in view.

### Normal View

Normal view, the most commonly used one, shows both the active slide in a large pane and a narrower pane that displays thumbnails of the presentation's slides. You can change each pane's size by dragging the vertical bar between them left or right.

While you're doing detailed design work on the active slide, this view lets you easily see what's on slides before and after it. Or you can scroll up and down in the Slides pane to review content elsewhere in the presentation.

Don't overlook the Notes pane tucked under the main pane. Here you can type notes that won't appear on slides, but are available for you to print. To enlarge the Notes pane, click and drag the bar separating it from the main pane.

### Outline View

This view is actually a tab on the left side of the Normal view. Clicking the Outline tab provides a

chance to think about the ideas and textual information contained in the slides. It's a good place to organize your thoughts and review which concepts come in what order in the slide show. This text-only view often reveals shortcomings you might miss when looking at text alongside eye-catching images. Remember that Outline view is linked to actual slides, so text changes you make in the outline will show up in the slide itself, which appears in the main pane to the right in Normal View.

### Slide Sorter View

This view (available via the button at the bottom of the screen with four little squares) is best for a bird's-eye look at how a presentation is shaping up and for rearranging slides. Don't forget: Zoom tools work in this view, too. You can quickly zoom out to see all of the presentation's thumbnails at once or zoom in for a closer look at a few slides.

Slide Sorter works well when you want to duplicate slides, too. You can click a slide, press CTRL-C to copy it, click the location where you want the duplicate to appear and press CTRL-V to paste it.

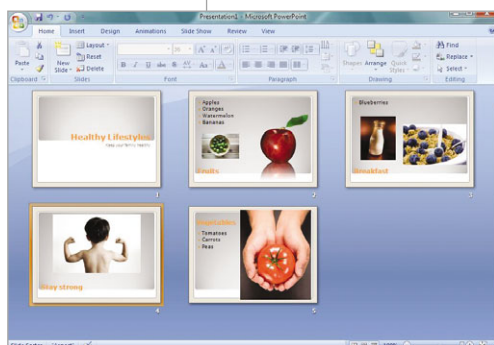
### Slide Show View

Click the screen icon at the bottom of your screen to start this view, which actually runs your presentation, making it the place to go for both dress rehearsals and real presentations. In Slide Show view, all animations, sounds, and other features should be operational.

### Change Your Default View

As you'd expect, PowerPoint defaults to Normal view. If you decide another view, such as Slide Sorter, better fits how you work, you can make it the default for either a single presentation or all of PowerPoint. For a single presentation, the change is easy: When you open a slide show, it opens to the view used when you saved it last. To make PowerPoint always open to a certain view, click the Office button and PowerPoint Options. Click Advanced, look under Display for a drop-down list labeled Open All Documents Using This View and choose the view you want to serve as the default. ■

BY TREVOR MEERS



Taking a different view of your slide shows often provides a fresh perspective that helps you make some quick improvements.



# Roxio PhotoSuite 8

## Create Calendars

Image Processing

Beginner

8 for  
Win2000/XP

If adding another project to your to-do list seems like a daunting task, this month's quick study of Roxio's PhotoSuite 8 may change your mind. In less than 20 minutes, you can complete a personalized calendar project that will last you an entire year.

### Choose A Template

Via the Start button, select All Programs, Roxio PhotoSuite 8, Photo, and Photo Projects Assistant. On page 1, under Select Project Type, choose the Calendars radio button and click Next. PhotoSuite comes bundled with a dozen default templates, and you have a choice among four monthly, quarterly, or yearly templates each. (To see all the templates, make sure Calendars is selected in the left pane of page 2, and be sure to install any Content discs that came with the software.)

For this introductory project, we'll walk through personalizing a basic yearly template called Just Photos that shows all the months on one sheet. (If you want, however, you could customize 12 separate months and combine them into one yearly calendar, or choose one of the more elaborate yearly templates, such as School or Vibrant, which show one month per page.) Click the Just Photos template and click Next.

photo to be cropped off will appear grayed out. You can also resize the entire photo by placing the mouse pointer in any of the four nodes in the middle of the box's outline and dragging horizontally and vertically. Or, to maintain the photo's proportions, place the mouse pointer in any of the corner nodes and drag diagonally.

Touch up the photo via the Pocket Editor. Click the left icon in the toolbar, and in the Preview window, use any of the tools such as AutoFix, Cropping, Remove Red Eye, or Saturation. When done, click OK. Repeat this process for the second photo and then move on to customizing the text.

### Customize The Text

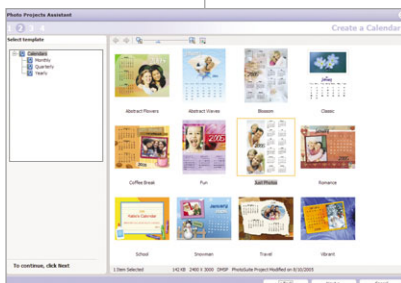
No matter which template you're using, you're going to want to customize at least one piece of text: the year. In the left pane, under the Start Date drop-down menu, leave the month as January and in the second drop-down menu, select 2009. If you want to start the week on a Monday rather than the default day of Sunday, select the Monday radio button next to Start Week On.

In the left pane, you'll see a box that lets you add your own text. This box appears alongside all the templates, even those without customizable text boxes. If you're using a template with text printed on the calendar, you can personalize this text by highlighting the text element and replacing the contents in this text box. In addition, you can customize the text by changing its color, font, type size, boldness, and other characteristics via the accompanying text toolbar. Once your photos and text are personalized, click Next.

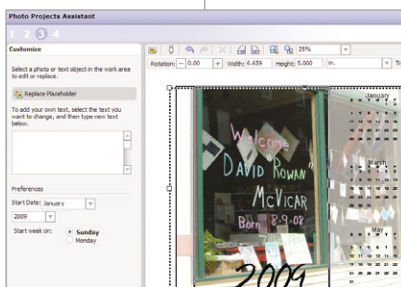
### Save & Print

The final step is to save and print your calendar. You may wish to save the file as a common file format and take the file to an office or stationery store to have the calendar printed. Or, many office, stationery, and art supply stores carry heavy, glossy stock. If your printer can handle this paper, save the file in the proprietary PhotoSuite format (.DMSP), load the paper into your printer, and click Print. Now you have a calendar to help you keep track of all those other "projects" on your list. ■

BY HEIDI V. ANDERSON



Roxio PhotoSuite 8 includes a dozen customizable calendar templates.



After inserting a photo into the template, use the bounding box to move or resize the photo.

### Select Photographs

Now is when the real fun begins, because page 3 is where you add your own material to the template. Click the top photo of the Just Photos template and select Replace Placeholder. Browse your hard drive,

locate a photo, and click Open.

Most likely, the photo will not fit exactly as you'd like into the placeholder. Use the commands in the toolbar at the top to adjust the photo; for instance, rotate it or change its transparency. Even more useful for editing the photo is the bounding box that surrounds it. Place your mouse pointer within the box and drag and drop the photo to place it in the desired location; the contents of the

# Browsers

Quick Studies  
How-To

## Manage Tabs In Internet Explorer 8 Beta

Internet  
Explorer 8

Intermediate

The “browser wars” seem to be back, with Firefox gaining an ever-increasing market share, Apple’s Safari offering even Windows users an alternative, and Google’s new Chrome browser crashing the party with a slew of innovations. Not to be outdone, Microsoft continues to work on its own Internet Explorer, still the top browser in terms of total users.

The latest iteration of Internet Explorer, IE8 Beta 2, is available as a free download at [www.microsoft.com/ie8](http://www.microsoft.com/ie8). IE old hands won’t immediately see a lot of differences in the newest version, but Microsoft has not been idle.

One set of improvements Microsoft rolls out in the newest version deals with tabs. Formerly the tool of multitasking power users, tabs now play a prominent role in the browsing habits of many. IE8’s tab tweaks improve on an already good feature.

(NOTE: Because IE8 is still undergoing testing and thus, may still have some glitches or behaviors that won’t appear in the final release, beginners may choose to wait for the finished product. As of press time, Microsoft hadn’t yet revealed the date it will release IE8.)

### Keeping Tabs

It’s easy to open a browser-load of tabs, each of them featuring one of your favorite pages. Sometimes, as tabs jostle for space at the top of the screen, it can be hard to sort them out or even remember what they are.

IE8 aims to make it a bit easier to keep tabs on your tabs. With a new feature called Tab Groups, whenever you right-click a link in a tab and choose Open In New Tab, the new tab shows up next to the old tab and is color-coded to match. Open a new tab from the second tab, and the most recent tab takes on the same color as the first two. The placement and coloring of the tabs makes it easy to see at a glance which tabs are related to one another. You can have multiple groups of tabs, each with their own automatic color-coding.

### Shortcuts

Open a new tab, and IE8 shows you several options for launching into new browsing directions.

The left half of the new tab page is devoted to two options: Reopen Closed Tabs and Reopen Last Browsing Session. If you accidentally closed a tab before you were finished, the first option can be a real time-saver.

If you’re after more than one or two closed tabs, you can reopen an entire browsing session with the second option. Reopening a browser session brings you right back to where you were before you closed your browser or experienced a crash, with all of your tabs open to the correct pages.

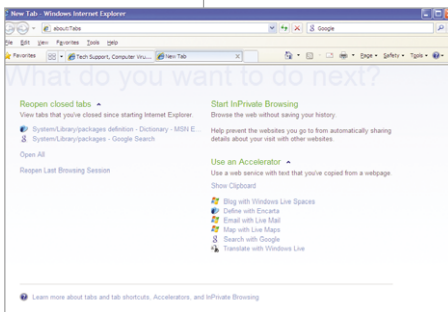
The right half of the page offers two additional options: Accelerators and InPrivate Browsing. Accelerators provide a quick route to various Web services. For Accelerators to be useful, you’ll need to have recently copied some text into the Windows Clipboard. For example, you might copy an interesting passage from a Web page that you’d like to write about in your own blog. Click the New Tab button and then click the Accelerator link for Blog With Windows Live Spaces. Or, you could copy an address from a Web site and then click the Accelerator to Map With Live Maps.

There weren’t a lot of Accelerator choices at press time, and nearly all of them pointed to different Microsoft products. If you happen to use those services, however, Accelerators actually can accelerate your browsing.

The Start InPrivate Browsing link leads to what Microsoft calls an InPrivate session. A new browser window appears, and a small InPrivate icon sits in the Address bar. With InPrivate browsing, IE does not keep history information or cookies. In other words, other users of your computer won’t be able to easily see what sites you viewed. It’s a good way to increase privacy temporarily without changing the overall security settings of the browser.

Putting InPrivate, Accelerators, and the other links on the New Tab page gives users a head start on their next browsing task. Google Chrome already makes similar use of its New Tab page, and it probably won’t be long before other browsers follow suit. With new competitors popping up, browsers can’t afford to stand still. ■

BY ALAN PHELPS



Internet Explorer 8 Beta 2 includes several options for working with tabs, including a New Tab screen that puts useful commands at the tip of your mouse pointer.

# Microsoft Excel 2007

## Troubleshoot Column Settings

Quick Studies  
Problem-Solver

Spreadsheet

Intermediate

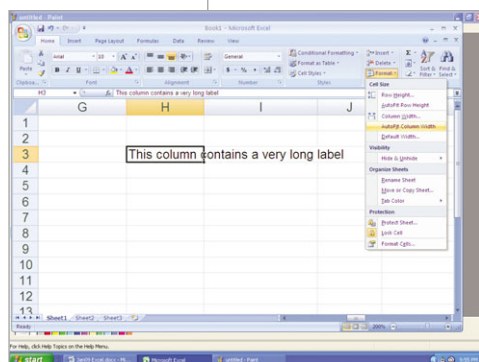
WinXP/Vista

A workbook's underlying grid isn't the unchangeable infrastructure some Excel users may think. The size, behavior, and number of columns are all adjustable. When you're stumped for a better column setup or find columns acting strangely, use the following tips to find solutions. (Most of these instructions apply with slight modification to rows as well as columns.)

**The words I'm trying to put in a cell are too wide to fit inside the cell.**

Just make the column wider. Excel's columns are set to a default width of 8.43 characters, which was set up to handle the average character count in the standard font. But columns can stretch anywhere from zero characters wide (which constitutes a hidden column) to 255 characters wide. To change a column's width, put the cursor over the vertical bar dividing one column's label from another (such as the line between E and F) and click and drag it left or right. You can let Excel fix the width for you by clicking

a cell and going to the Home tab's Cells group. Click Format and choose AutoFit Column Width. For an even quicker adjustment, double-click the right border beside the column's letter. This automatically adjusts the column's width to handle the widest item in the column.



To quickly set columns to handle wide information, use Excel's AutoFit Column Width feature.

**I have many cells that are too narrow. I need a fast fix for all of them.**

You can AutoFit every cell at once by using the Select All button. If you didn't know there was such a thing, you're in for a pleasant surprise. Clicking the little triangle icon in the upper-left corner between A and 1 selects every cell. To AutoFit all of their widths to their contents, double-click the vertical bar between any two columns.

If you'd rather adjust the widths of a few adjacent columns in one step, select them all at once by holding down SHIFT as you click the letter at the top of each column. Then drag the bar on the right side of the rightmost column. All the

columns will match the width of the one you adjust. The same trick works for nonadjacent cells; just hold down CTRL instead of SHIFT as you click them.

**But one cell's contents are a lot wider than everything else in the column, and all the extra space looks odd in every cell except that one.**

In that case, try wrapping the long text on several rows inside that cell rather than making the cell wider. Right-click the cell and choose Format Cells. Click the Alignment tab, checkmark Wrap Text, and click OK. Now you can make the column narrower, and Excel will create as many lines of text as necessary to make the words fit into the cell's width. (This still may not please you aesthetically, though, because now this cell is probably taller than the others in its row.)

**I dragged a column to such a narrow width that I can't see it anymore. I can't even find anything to click on to enlarge it again.**

Making a column this narrow actually hides it. If you do this accidentally and realize it immediately, the best bet is using the undo function (press CTRL-Z) to step backward until Excel undoes the troublesome dragging operation. If you intentionally hid the column or did it long enough ago that Undo isn't a viable choice, use the Unhide function. Select the columns to the left and right of the hidden ones (such as E and G if you hid F). In the Home tab's Cells group, click Format and Hide & Unhide. Choose Unhide Columns.

**I need an extra column in the middle of my data, but I'm worried about disrupting all my formulas when everything shifts to accommodate the new column.**

To insert a column, click the column heading to the right of where you want the new one. Then right-click and choose Insert. Note that if you select more than one column, Excel inserts the same number of new columns. Excel handles formula adjustments for you by automatically updating formulas to reflect the addition (or deletion) of columns and rows. ■

BY TREVOR MEERS



# Online

Quick Studies  
How-To

## Store & Share Files Online With Dropbox

Dropbox

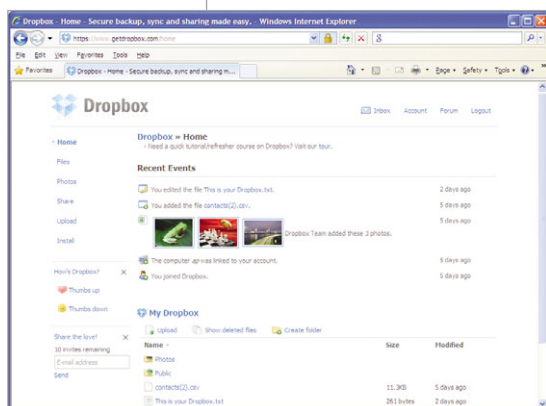
Intermediate

The Web doesn't lack for ways to store and share files online, but not all sites of this type rate well on the user-friendliness scale.

Dropbox, a relatively new and particularly well-designed storage service, offers a roomy 2GB of space free. For \$9.99 per month, you can increase that to 50GB. Dropbox works with Mac, Windows, and Linux operating systems, letting you store files and share them easily between your own computers or with associates, friends, and family. Set up your own account at [www.getdropbox.com](http://www.getdropbox.com).

### Fade Away

After you install the local Dropbox client software, the service works mainly in the background. You'll see a standard-looking folder on your computer called My Dropbox. You can drag files in and out, copy files, and otherwise use the folder normally.



Dropbox is a cross-platform online storage site that gives you 2GB of free space and multiple ways to conveniently access your data.

appears on a file's icon once it has been copied to the Dropbox servers. That means your file is safe, as well as accessible from anywhere.

Dropbox also syncs files with the server and your other machines anytime you make a change. In fact, Dropbox is smart enough to sync only the parts of the file that you changed, allowing syncs to run much more quickly and efficiently.

### Web Access

To reach your files from any computer, sign on to the Dropbox Web site. There you'll find a list of your files. You can view many types of files, such as photos and text documents, simply by clicking the file name. If you can't view the file in your Web

browser or you want to edit the file, you can download it by clicking the Down arrow that appears to the far right of each file's name.

When you're finished editing, save the file back to your Dropbox folder to make sure the changes are synced to your other computers. Go back to the Dropbox site and look for the Upload link. Browse for your updated file and send it off to the Dropbox server. The rest happens automatically.

The Dropbox Web site also allows you to look at the history of any file in your Dropbox folder. Click the Down arrow next to a file and choose Revisions. You'll see a list of every time when the file was changed. You can revert to a previous version of the file. You can also undelete files that you previously deleted in one of your Dropboxes—look for the Undelete link on your main Dropbox page and then select the file you want to retrieve.

### Share Alike

The fact that your files are already on the Dropbox server makes it easy to grant access to others. You can do this in two ways. First, you can create a shared folder with specific people. At the Dropbox Web site, click Create Folder. Give the folder a name and then click the Down arrow to the far right of the folder and click Share Folder. On the next page enter the email addresses for those you want to share the folder with.

Everyone with access to a shared folder can save items to that folder or edit files within the folder. Whenever anyone changes a file in a shared folder, those changes are synced with the Dropbox folder of everyone else in the group.

You can also share specific files with the entire world using your Dropbox Public Folder. The Public Folder is created by default within your main Dropbox folder. Each file in the Public Folder has its own URL, and anyone who knows the URL of a particular file can download it.

To get the URL of a file you want to share, move the file to the Public Folder and then right-click the file's icon. Choose Dropbox and then Copy Public Link. You can then paste the URL in an email or other message to anyone you want to view the file. With these simple but well-executed features, Dropbox has a lot of potential. ■■

BY ALAN PHELPS

# Microsoft Word 2007

## Use Word As A Blog Composer

Word Processing

Advanced

WinXP/Vista

**B**logging has become an important way for people to share experiences with friends or the world at large. Web sites that host blogs provide word processing capabilities, but they are often simplistic. That's where Word 2007 can come in.

It may seem like a strange idea to use Word to write your blog posts, but there are a few reasons to consider it. If you are new to blogging and familiar with Word, you can stay with the application you know. Also, Word offers many more formatting features than are normally available in an online editor. Finally, Word lets you focus on what you want to say with a minimum of coding concerns.

### Create A Post

Click the Office button, click New, and double-click New Blog Post. A blank document appears. If you haven't already registered Word with a blog account, then the Register A Blog Account dialog box will open. You can choose Register Now or Register Later, but for now, click the Office Online link to see how the supported blog providers work with Word 2007.

Word 2007 explicitly supports: WordPress (free; [www.wordpress.com](http://www.wordpress.com)), Blogger (free; [www.blogger.com](http://www.blogger.com)), Windows Live Spaces (free; [spaces.live.com](http://spaces.live.com)), Microsoft Windows SharePoint Services (for businesses), Community Server (prices vary; [www.communityserver.com](http://www.communityserver.com)), and TypePad (prices vary; [www.typepad.com](http://www.typepad.com)).

If your blog provider isn't listed, it still may work with Word 2007. Word supports most sites that use either the Atom or MetaWeblog API (application programming interface). We will look at setting up the provider later. Return to Word and click Register Later.

### Blog Tabs

A blank page appears with the field Enter Post Title Here at the top. Notice that the Ribbon contains Blog Post and Insert tabs. The Blog area of the Blog Post tab contains the functions needed to publish a blog

post created in Word and to create and manage your blog provider accounts.

The Insert tab contains a few areas, the largest of which is Illustrations. Of the functions on this tab, you'll probably most often use Picture, to insert images, and Hyperlink, to create links.

Click in the Enter Post Title Here area and type a title for the blog post. Now click below the horizontal line and compose your blog. Use any of the formatting tools available on the Ribbon.

### Post Your Blog

Now that you have something to post, you will need to upload it to your blog host. If you don't have an account, we recommend WordPress or Blogger to get started, because both are free and easy to set up. We will use WordPress as an example, but the process is similar for all the services. You will need to know your blog's username and password and, in some cases, the URL of your blog.

Click the Blog Post tab on the Ribbon and then click the arrow under the Publish button and select Publish As Draft. Publishing as a draft lets you preview the blog entry before it goes live. You can use Publish to turn the blog post live right away.

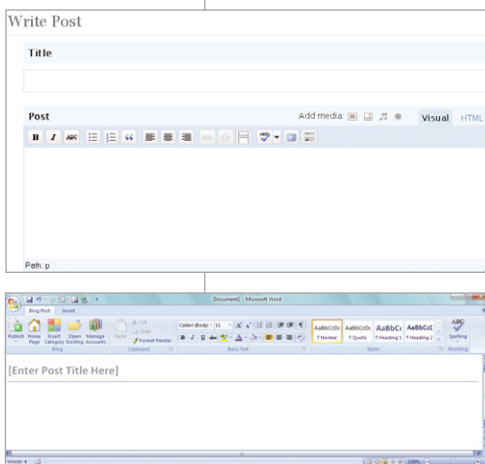
Click Register An Account in the Registering A Blog Account dialog box. Click the drop-down list and choose WordPress (or another provider you already have set up) and then click Next. The New WordPress Account dialog box opens. In the top box, type or paste the URL of the blog between the brackets and then delete the brackets. For example, if your blog address is <http://betterblogss.wordpress.com>, the entry should look like this: `http://betterblogss.wordpress.com/xmlrpc.php`.

Type in your username and password and click the Picture Options button. Choose My Blog Provider from the drop-down list and click OK. Click OK again. Click Yes to confirm that you'd like to post the entry, and you should see a message at the top of your entry saying it has been posted.

Now log on to your blog site and preview the post. It may look slightly different than it did in Word. This is because the templates that blog providers use have some rules of presentation that override Word's. Make any necessary adjustments and then publish your post for the world to see. ■

BY TOM HANCOCK

There are many fewer formatting options available through a blog host such as WordPress (top) than in Word (bottom), unless you want to delve into HTML.



# Quick Tips

## Secrets For Succeeding In Common Tasks

BY STEPHEN J. BIGELOW

### Ink & Toner Cartridges

**Question:** What's the best way to recycle old ink or toner cartridges?

**Answer:** Many major manufacturers, such as HP, provide reusable packaging and a return label—just pack up the old cartridge and add it to your regular outgoing mail (you may have to pay a small shipping fee unless the shipping is prepaid). If the toner

manufacturer doesn't have a recycling program in place, check with a retailer such as Staples or Best Buy. For example, the Staples InkDrop program lets you create an account and return your empty ink or toner cartridges in prepaid packaging. Staples will ship you a replacement cartridge and recycle your old ones. The fee for the replacement cartridge is charged to your credit card.

### Wireless Networking

**Question:** I live in a condo with a lot of wireless network users, and I experience frequent disconnects. Can my wireless LAN (local-area network) be affected by interference from neighbors' wireless signals?

**Answer:** Although wireless LAN technology breaks up the frequency range into individual channels, there are only a handful of channels available, and the default channel is often Channel 6. If there are several wireless devices using the same frequency, it's possible to experience enough signal interference to disconnect your PC from the access point.

**WIRELESS**

Use this section to configure the wireless settings for your D-Link Router. Please note that changes made on this section may also need to be duplicated on your Wireless Client.

Save Settings Don't Save Settings

**WIRELESS NETWORK SETTINGS**

Enable Wireless: ☒ Always [Add New](#)

Wireless Network Name: dynamic (Also called the SSID)

802.11 Mode: 802.11n only

Enable Auto Channel Scan: ☒

Wireless Channel: 2.437 GHz - CH 6

Transmission Rate: Best (automatic) (Mbit/s)

Channel Width: Auto 20/40 MHz

Visibility Status: ☒ Visible ☐ Invisible

**WIRELESS SECURITY MODE**

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Enterprise does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode: WPA-Personal

Modern wireless routers often include automatic channel-scanning features that will attempt to choose a channel with the least signal interference. Check your router's wireless setup and enable the feature if it's available. Otherwise, you can try setting the channel manually. Also, set characteristics such as the transmission rate and channel width to automatic so that the router can make the most appropriate choices for your environment.

To minimize possible interference, allow your router to select the best channel, set transmit speeds, and select channel width automatically.

### Data Protection

**Question:** Will airport X-ray machines wipe my laptop's hard drive or my camera's memory card? How can I protect my data?

**Answer:** The effects of airport X-ray machines on digital media remain a matter of some debate. But, X-ray intensity has decreased substantially from years past, and brief airport scanning should not affect your data. Because you have no

choice but to run your laptops through the X-ray machine at a security checkpoint, your best protection is a regular backup process to guard your applications and data against the unlikely event of accidental hard drive corruption.

When planning to travel, call your air carrier or peruse the packing and security guidelines found on your air carrier's Web site; most will reference digital

media safety relative to X-rays and security. If you're carrying a laptop or have access to the Internet from your destination, it's usually an easy matter to download photos to your laptop or email them directly to yourself at home before flying back. An increasing number of aspiring photographers use remote backup services to protect their precious photos before going through an airport security checkpoint.

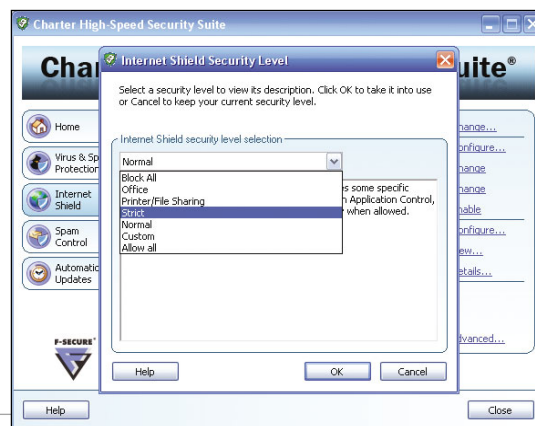


## Security

**Question:** If I change the security settings on my PC, will that interfere with network tasks such as printing to the network printer through a print server?

**Answer:** It really depends on the settings you choose and the changes you make. Generally speaking, any changes that tighten security or impose additional restrictions on the data that enters or leaves your PC can disrupt network printing (but will have no affect on local Centronics or USB port printing). In a recent test using F-Secure, we found that moving the Internet Shield Security Level Selection from Normal to Strict stopped all

Record your current security settings before making any changes because tightening security can potentially stop some services, such as network printing.



printing sent through a print server. Setting security back to the Normal level restored network printing.

We recommend you write down your current security settings

first before you make any changes. After you make any changes, try printing normally. If you find that network printing is no longer available, you can go back and undo the changes.

## IP Addresses

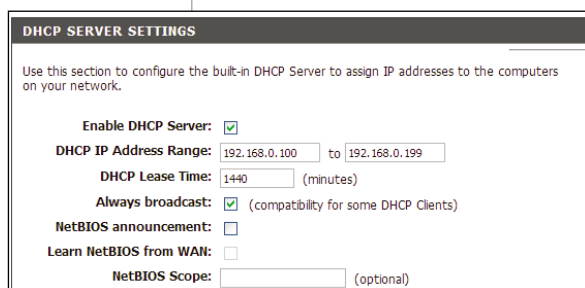
**Question:** Is there any reason that I would use static IP (Internet Protocol) addresses on my network?

**Answer:** The DHCP (Dynamic Host Configuration Protocol) feature in your router assigns IP addresses to all of the PCs on your network. This makes network configuration much easier because a new PC can be added, and it receives an IP address automatically. When a PC leaves the network, its IP address is freed up for other new PCs to use. Dynamic IP addresses are temporarily assigned in terms of “leases.” For example, a new PC appears on the network, and it receives a dynamic IP address for some finite period of time (such as 24 hours). When the lease expires, the IP address is released and must be renewed by the DHCP server. The thing to remember is that when a lease

is renewed, the DHCP server may assign some other IP address to your network PC (whose lease just expired)—this is rare, but it happens, and it’s perfectly normal.

If you provide a Web server, network storage, or other services on your network, it’s important that the IP addresses of those systems remain unchanged so that users can find those resources. In such cases, you should assign static IP addresses to those devices taken from a pool of IP addresses that are located outside of the dynamic IP address range handled by DHCP.

For example, suppose you have a SOHO (small office/home office) network with an IP address range from 192.168.0.0 to 192.168.0.255. You can configure the DHCP server to handle a portion of that address range dynamically such as 192.168.0.100 to 192.168.0.199. So now, any device that seeks a dynamic IP address will receive any of the 100 addresses in that range. If you have a server or other device that requires a static IP address, you can assign an address up to 192.168.0.99 or from 192.168.0.200 to 192.168.0.255. Your router offers full control over the DHCP settings.



Configure the router to only manage a portion of your total IP (Internet Protocol) address range, leaving some addresses free to assign as static IP addresses.

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## Call (800) 368-8304

Monday to Friday, 8 a.m. to 8 p.m. CST  
Get help in plain English!



## Email

Send us the details using our online form, and our tech experts will answer your questions via email. Use your Internet browser to visit: [SmartComputing.com/smartpeople](http://SmartComputing.com/smartpeople)



## Online

Browse our Basic Troubleshooting articles and find the answers to your computer problems in our Solutions Knowledgebase. Visit us at: [SmartComputing.com/techsupport](http://SmartComputing.com/techsupport)

[www.smartcomputing.com](http://www.smartcomputing.com)



# Hardware & Software Reviews

With so much information out there about computers and technology, it can be difficult to even know where to start. What should you consider when building a media center? What are the best wireless networking products? Before you make your next purchase, make sure you take a look at our Hardware Reviews and Software Reviews sections for another opinion. Reviews are separated into easy-to-find categories including Audio, Computer Parts & Components, Input Devices, and more. You'll find all sorts of great articles on topics ranging from mobile computing and media players to networking and video and photography. You can find articles not only from *Smart Computing*, but also from *PC Today* and *Computer Power User*. Search these articles and make your next purchase a smart one.

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1. Go to [www.smartcomputing.com](http://www.smartcomputing.com) and click the Read Software Reviews or Read Hardware Reviews link.
2. Click any of the links to search by product category. You can also search by sub-category or simply click the Show All link to view all articles under that heading.
3. To enter a keyword search, scroll to the bottom of the page and customize your search. You can enter exact terms or broad subjects to find relevant articles within our editorial database.

Subscribers, be sure to add these articles to your Personal Library so you can keep all of your information in one convenient location for future reference. Simply log in and when you view an article you want to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like to keep your information organized.



## Tune Up Your PC



January is often a time when people make a commitment to leading a healthier lifestyle. Don't overlook your PC's health this time of year. Visit the *Smart Computing* Tech Support Center for tips on tuning up your computer.

## Cover Story

This month, in 1983, *Time* magazine named the computer the machine of the year.



## Holiday Spirit

Christmas may be over, but gift-giving is always in season. Click the Gift Subscription—Buy Or Renew link on the *SmartComputing.com* home page to give the gift of *Smart Computing*.

*Smart Computing's* Fun Site Of The Day (Nov. 7, 2008)

## MazeWorks

If you have a soft spot for old-fashioned puzzle games, check out this site. It's a collection of flash-based games derived from simple board and puzzle games. Many of them have been around for decades, some more than a century. Each description includes a bit of historical information about the origins of the game. Ever wonder if a game invented more than a century ago is easy to solve? Spend some time at *MazeWorks* and find out.

[www.mazeworks.com](http://www.mazeworks.com)





# Home Networks

**W**hen it comes to researching the types of home networks available, there are lots of considerations. A wired network, for instance, allows for quick

connection speeds and a reliable connection. Wireless networks, however, provide mobility and convenience. This month, we take a look at the most commonly used network technologies.



## 802.11a

This wireless standard was one of the first to be introduced, but it never caught on with consumers because it requires more expensive wireless devices than other wireless standards, and it has a shorter range than other wireless standards. 802.11a is more expensive partly because it operates on the 5GHz spectrum (a continuous sequence of wireless frequencies), which provides larger capacities capable of handling more traffic. It has a maximum speed of 54Mbps (megabits per second), which means files transfer more quickly than with the 802.11b standard, for example. The network capacity and speed has made it appealing to enterprises; however, 802.11a is growing obsolete.

## 802.11b

802.11b (11Mbps on the 2.4GHz spectrum) was a widely used home wireless network protocol until the inception of its successor, 802.11g. 802.11b gained popularity as a less-expensive alternative to 802.11a, but it is still much slower than wired Ethernet Internet speeds and even the 802.11a wireless standard. As 802.11g gains momentum with consumers, 802.11b is phasing out.

## 802.11g

As the quickest wireless standard fully approved by the IEEE, 802.11g supports a maximum throughput of 54Mbps and operates on the 2.4GHz spectrum. This lets you download and transfer files at a much quicker rate than earlier wireless standards, such as 802.11b. 802.11g is backward-compatible with devices that support 802.11b.

## 802.11 Draft N

Expected to be fully approved of by the IEEE in late 2009, 802.11n will provide wireless users with the fastest wireless Internet to date (replacing 802.11g). Manufacturers are jumping the gun by offering Draft N products, which support the standard as manufacturers expect it to be ratified. As with 802.11b and 802.11g, this standard makes use of the 2.4GHz frequency (and, in some cases, 5GHz). While you will see faster data transfers than you would with 802.11g, you shouldn't expect to get near the max theoretical speeds (300Mbps or more) of 802.11 Draft N. Products that support the new protocol include MIMO (Multiple Input/Multiple Output) technology, which uses multiple antennas from both the transmitter and the receiver to enhance range and performance. For example, your computer and your wireless router would communicate more often and at greater distances with 802.11n than with 802.11b/g. This allows you greater freedom to roam away from your router, while it also means you can stream video at a faster rate.



## Ethernet

Commonly referred to as “fast Ethernet,” 100Base-T Ethernet is a quicker version of traditional wired Ethernet. It has transfer speeds of 100Mbps, which is quite an improvement from the pedestrian 10Mbps speeds available from the original Ethernet. You will need to purchase a 10/100Base-T Ethernet cord if that’s what your NIC (network interface card) supports.

## Gigabit Ethernet

As the newest and fastest wired Ethernet technology for home use, Gigabit Ethernet (or GigE) provides throughput speeds of up to 1,000Mbps, which is equal to 1Gbps (gigabit per second). GigE ports are backward-compatible with 10/100Base-T Ethernet cords, which is why you will sometimes see Gigabit Ethernet ports labeled as 10/100/1000Mbps Ethernet. This type of network Internet connection is good for those who often stream or transfer media, such as audio and video files. In order to use Gigabit Ethernet, your NIC port must support it. If it is supported, you may see it labeled as “GbE.”



## Powerline Networking

With powerline networking, you can use your home’s electrical system as a conduit for Ethernet. You can purchase adapters that plug into a wall outlet and connect to routers, computers, and other devices via a USB or Ethernet port. The adapters use an unused spectrum to transmit the signals across the power lines, providing Internet to all of your electronics, including TVs and other pieces of your home network. Presently, powerline network adapters can provide speeds of 200Mbps, but there are plans to launch 400Mbps devices later this year.



# What To Do When Your Internet Connection Disappears



One minute you're cruising around the Internet. YouTube, Wonkette, eBay—everything's flying along. Then you step out of the room for a while, maybe even overnight, and by the time you come back the connection is dead. The browser presents a pitifully empty error page for every site you try to visit. No email is coming in, and that little connection icon in Vista's Notification Area is in alert mode. We can help.

First, make sure the problem is what you think it is. Plenty of things can go wrong with Internet-enabled programs and their online materials, and not all involve an Internet connection directly. Try restarting the program in question to make sure the problem isn't isolated to one application. The aforementioned connection icon in Windows can be a good clue that something is wrong systemwide. Testing several different kinds of applications (not just different Web sites) is also a good step. If your browser, your email client, and your online

music service are all unable to connect, you can be certain that the issue is bigger than any single application. Ruling out security software, Windows itself, and your own hardware can be a little trickier, however. Check your antivirus, firewall, and any other monitoring utilities to make sure they aren't blocking your connection. If you have other machines on your network, now would be a good time to check them, as well. Now look at the lights on your router and modem. Are they blinking (or not blinking) in their normal ways, with both WAN (wide-area network) and LAN (local-area network) indicators functioning normally? You may need to consult the manufacturer's documentation to figure out the blink codes, but they may be telling you something very important. If the modem appears to be normal but the router doesn't, your problem may be with your LAN rather than your connection to the Internet.

Next, you should commit this phrase to memory: When in doubt,

reboot.

Once you're confident you are dealing with a connectivity issue, the first best step (as in nearly every situation) is to restart the components in question. Start with your PC. Shut it down. Then power down your network router. It may have a power switch on the back, or you may need to simply pull the plug. Keep the router off and reboot the modem. To reboot the modem, first reset, turn off, or unplug the modem. Keep it off for 10 seconds and then turn it back on. Let it power up and see if it connects successfully to your ISP (Internet service provider). Your ISP's documentation can help you discern meaning from the flashing lights, but a solid green from the WAN indicator is usually a good sign. Then bring up the router. Let it connect to the modem. Finally, power on your PC. Rebooting may not always solve the problem, but it eliminates most

## Be Prepared

Losing Internet connectivity can really put a crimp in normal troubleshooting. It's hard to find answers on Google or chat with your ISP's support reps when you can't get online. Take a few minutes now to gather the following information in one place so that you have it handy if you can't get online.

✓ Users manual for network router or wireless access point and cable/DSL modem

✓ Setup instructions from your Internet Service Provider

✓ Any installation discs or software provided by your ISP or modem manufacturer

✓ Your machine's standard IP settings; retrieve them in Vista by entering `cmd` in the Start Search box and then entering `ipconfig` into Windows' command prompt

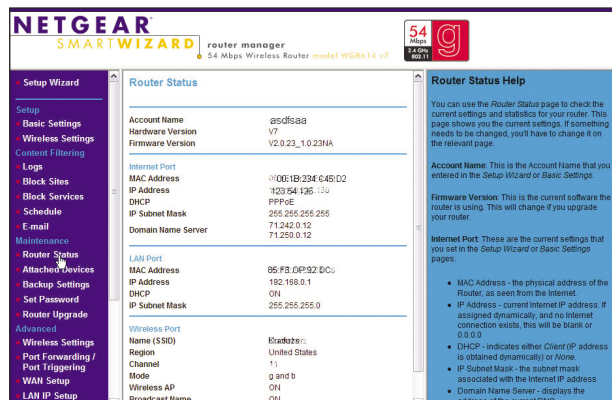
✓ Telephone contact information for your ISP's technical support help desk



temporary glitches and removes another easily solved possibility.

Take a few moments to look for obvious physical problems. Start with your connection. Check each cable, beginning with the network cable running from the back of your PC to the router. Check the cables between the router and DSL (Digital Subscriber Line) or cable modem. Then check your phone or cable lines. Make sure each sits firmly in its port and that there aren't obvious cuts or frays. It may sound silly, but take 10 seconds to make sure everything's powered on. You never know when a curious cat or mischievous toddler knocked something loose. Finally, check to make sure that the other services from your ISP are working. If you're a DSL customer and your phone is working properly, the problem is not with your phone line. On the other hand, if, for instance, cable customers see snow on the TV, they know the issue isn't limited to just broadband. Contact your service provider to learn about outages in your area or problems with your overall account.

Now that the easy stuff is out of the way, it's time to delve into more serious troubleshooting. First, connect to your network router's admin console using Internet Explorer, if possible. The URL is normally an IP (Internet Protocol) address. 192.168.0.1 is common, though you'll have to check the router's documentation for model-specific details. If you can't get to the router, the status of your Internet connection is moot. In that case, follow the manufacturer's



Network routers and most broadband modems have admin consoles you can use to troubleshoot connection status and settings.

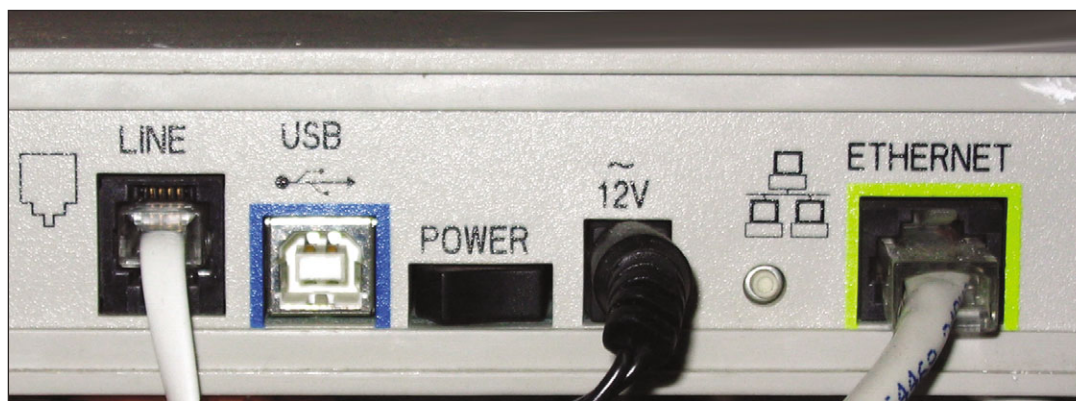
**Plenty of things can go wrong with Internet-enabled programs and their online materials, and not all involve an Internet connection directly.**

troubleshooting tips or find a way to access *Smart Computing's* Tech Support Center. If you can log in to the router successfully, check its WAN status and other settings from the administrative screens. Again, you'll have to check the documentation for both the router and your ISP in order to learn the precise location of each setting and its proper value, but often, restoring a corrupted setting or releasing and reacquiring the connection from the modem will restore lost connectivity.

If you can't find a solution in the router or modem's utilities, contact your ISP's support hotline. Make a list of all the steps you've taken so far, as

well as all the relevant settings from your router and PC. Have your account information ready, as well. They'll be able to let you know about any broader network outages that may be affecting your connection as well as anything specific to your account. Some Internet outages are account-configuration issues rather than technical glitches. The help desk can also delve deeper into modem and network settings than you can. You may need to exercise patience as they walk through their scripts, but you'll get nearer and nearer a solution as you work with them to work through the possibilities. ■

BY GREGORY ANDERSON



Use the reset button or power switch to restart your broadband modem and router during the troubleshooting process.

# How To Fix Common Problems With Microsoft Office

Office 2007 has more features, improved interoperability, and a much different interface compared to its predecessors, but one thing remains the same: Eventually you'll run into bugs, performance snags, or other problems using it.

There is hope. As long as you know how to update Office (and Windows), along with a few extra tricks, solving the suite's common problems is a snap.

## Keep It Updated

An ounce of prevention is worth considerably more than a pound of cure when it comes to Office. Keeping the software updated can stop malicious programs such as viruses from accessing your files, stave off errors, and make Office perform faster and with greater stability.

**Problem:** There's a new virus on the loose that affects Office, and you've heard Microsoft has released a patch, but you don't know where to download the fix.

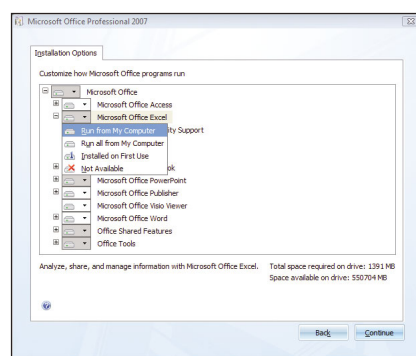
**Solution:** The first thing you should do is visit the Microsoft Office Downloads section at [office.microsoft.com](http://office.microsoft.com) and add it to your browser's list of Favorites/Bookmarks. Microsoft places download links for all Office patches, service packs (collections of patches and utilities that are released as single downloads to keep Windows up-to-date), and other updates at this site. These downloads fix bugs, add features, and enhance the overall security of the suite. It is important to check for new downloads at least once a month to see if any critical updates are available.

If you'd rather automate things, visit [office.microsoft.com](http://office.microsoft.com), click Downloads

again, and click the Office Update link in the left margin. This launches a utility that scans your computer to find out what updates are missing from your copy of Office.

**Problem:** Other software or hardware products cause Office to crash each time you use them together.

**Solution:** The need to download and install patches isn't limited just to Office. To make sure the suite runs as efficiently as possible, you should visit the manufacturers' Web sites for all your other hardware and software to see if updates are available. It is especially important to keep the driver software for your video card, printer, and scanner up-to-date. And don't forget about Windows itself. Visit [windowsupdate.microsoft.com](http://windowsupdate.microsoft.com) to determine which updates your OS (operating system) needs, or the Windows Downloads site at [tinyurl.com/5u66qq](http://tinyurl.com/5u66qq) to manually search for the latest patches. Note that you need to use Internet Explorer to access the Windows Update Web site.



Adding or removing particular Office features is easy if you know where to look.



## Installation & Removal Issues

Many of Office's most vexing problems have to do with installing or removing it, but the good news is that these are often the easiest ones to fix.

**Problem:** You're low on hard drive space and you're not sure whether you have enough room to install Office 2007.

**Solution:** Depending on the options you select and the OS you use, an Office 2007 installation requires anywhere from 1.5GB (Office Basic 2007) to 3GB (Office Ultimate 2007) of hard drive space. To play it safe, try to make sure there are at least 5GB of free space on the drive before installing Office 2007. That provides plenty of room for the suite and leaves some slack space for handling virtual memory, which Windows uses for storing program data when your system's RAM is otherwise occupied. Virtual memory is extremely important, so you always want to leave at least 1GB of free space on your hard drive. That's a bare minimum; you should shoot for more whenever possible.

**Problem:** You want to add or remove a single Office 2007 application or component without disturbing the rest of the suite or having to reinstall from

scratch. Alternatively, you want to repair your Office 2007 installation.

**Solution:** In Windows XP click Start, click Control Panel, and double-click Add Or Remove Programs (in Classic view). Scroll down the list of installed programs until you find the Office entry that corresponds to the version of Office installed on your computer, click that entry to highlight it, and click Change/Remove. In Windows Vista click Start, click Control Panel, and double-click Programs And Features (again in Classic view). Find the entry that corresponds to your version of Office, click it, and click Change.

When the Change Your Installation Of Microsoft Office 2007 dialog box appears, select the Add Or Remove Features radio button and click Continue. An Explorer-type window appears that lets you expand entries by clicking the plus signs (+) next to them. When you see an entry you want to add or remove, click the drop-down menu next to it and click Run From My Computer if you want to install that component or Not Available if you want to remove it. When you are finished, click Continue to complete the installation or removal process, and keep your Office 2007 installation CD handy in case the update calls for files contained on the disc.

If you would rather repair Office 2007 to see if you can fix a broken program, then open the dialog box as described above, select the Repair radio button, and click Continue. Wait for the configuration process to complete and be aware that the repair process deletes any personalized configuration settings that you established in Office applications.

**Problem:** The installation process was interrupted (due to a power outage or other event), and when you try to install Office 2007 again, the following error message appears: 2007 Microsoft Office <suite name> encountered an error during setup.

**Solution:** This is a rare problem that happens when a file called Rgstrtn.lck

is installed during the setup process but not removed at the end of the setup process. When you try to install Office 2007 again, it sees that the Rgstrtn.lck file is still installed and refuses to complete the installation.

To delete the file, click Start in Win-XP, click Run, type `cmd`, and click OK. If you have Vista, click the Windows icon and type `cmd` in the Start Search box. Then in the command line box that appears in either operating system, use the following steps provided by Microsoft:

```
Type cd "%allusersprofile%\
Application
Data\Microsoft Help" and then
press ENTER
Type attrib -h rgstrtn.lck and then
press ENTER
Type del rgstrtn.lck and then
press ENTER
Type exit and then press ENTER.
```

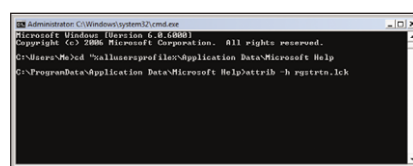
Reinstall Office 2007 once those steps are completed, and it should finish properly.

## Activation Woes

Like it or not, Office 2007 comes with the same Microsoft Product Activation technology used in Vista. Here's how to deal with a few of the most common activation troubles.

**Problem:** You need to activate Office 2007, but your PC isn't connected to the Internet.

**Solution:** Use Microsoft's toll-free activation number to obtain an activation code over the telephone. This can be extremely tedious because the code has so many digits, but it's your only



The Command Line Editor hearkens back to the days of DOS—pay attention to slashes and spaces when typing.

option if you don't have an Internet connection or are stuck in a remote location with a notebook PC. Just follow the prompts in the product-activation wizard that pops up when you launch an Office application, selecting Activate By Telephone. Call the supplied number. Be sure to have your installation ID handy so you can relay it to Microsoft, and be ready to write down the confirmation ID code Microsoft will give you in return or type it directly into the computer. If you don't see the product-activation wizard, open an Office 2007 application, click the Office button, click the <Office program name> Option button, click Resources, and click the Activate button.

**Problem:** You find that Office applications load and you can view files, but you can't edit or save existing documents or create new documents.

**Solution:** Either your product activation wasn't processed properly, or you loaded individual Office apps at least 25 times and triggered the Reduced Functionality mode, which hobbles Office programs. Note that the activation grace period allows for 25 product launches total, so you can't open Word, Outlook, Excel, and so on 25 times each and expect to get away with it. Activating Office using either the Internet or telephone option will restore all the suite's functionality. Your files will



Microsoft offers a compatibility pack that lets users of older versions of Office open Office 2007 files.



remain unaffected whether you activate or not, so don't worry about losing data.

## Miscellaneous Problems

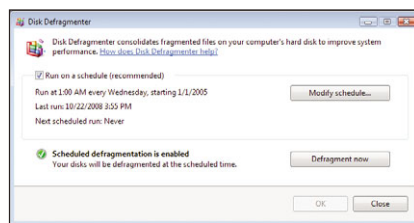
Experiencing a problem that doesn't quite fit into the other categories? Check here for a likely solution.

**Problem:** You want to open Office 2007 files in other versions of Office.

**Solution:** Office 2007 has no trouble opening files created in previous versions of the suite, but files saved in Office 2007's native formats can't be opened if you use a previous version of Office. Fortunately, Microsoft offers a free compatibility utility that should be installed on all computers that use older versions of Office. You can download it at [www.microsoft.com/downloads](http://www.microsoft.com/downloads). If a link to the file doesn't appear on the main download page, use the Search box to look for Microsoft Office 2007 Compatibility Pack.

**Problem:** You try to open an Office 2007 program that was preinstalled on your computer, but the following error message appears: <Office program name> is configured, but you do not have a valid Microsoft Office 2007 license to use this application. You will not be able to make changes to your data in <Office program name>. To stop this message from appearing when you start <Office program name>, you will need to obtain a valid Microsoft Office 2007 license or remove <Office program name>.

**Solution:** OEM (original equipment manufacturer) versions of Office 2007 are different from the ones you purchase at a retail store and must be properly set up by the computer's hardware manufacturer before they will work. If you see this message, it is because the company that made your computer forgot to run a file that is critical for completing the installation of Office 2007. End users do not have access to this file, so you must contact the computer manufacturer to resolve this particular problem.



**Defragmenting your hard drive can boost overall computer performance, and it doesn't cost anything except some time.**

## Performance Issues

Office 2007 is far more powerful than previous versions, but the price for all that extra functionality is steeper hardware requirements. Here's how to squeeze the most performance out of your existing hardware and some tips on what components to focus on if you'd like to make Office run smoothly.

**Problem:** Office programs load slowly, and it takes a long time to access or save files.

**Solution:** We already mentioned the importance of keeping your hardware drivers up-to-date; installing the latest drivers available for your OS can sometimes dramatically boost the performance of a device. Drivers aside, when Office runs sluggishly, the next step is to run Disk Defragmenter to reorganize all of the data on your hard drive so that Windows stores your files and folders as efficiently as possible. Because the hard drive will have to spend less time looking for data once this process is complete, it may be just what you need to add a little oomph to Office. Access the utility in WinXP by clicking Start, expanding All Programs, expanding Accessories, expanding System Tools, and clicking Disk Defragmenter. Click the entry that corresponds to the drive you want to optimize and click Defragment. Do not run any other programs until the process is complete.

In Vista, click Start, type **Disk Defragmenter** in the Start Search field, and click the corresponding program. Click Defragment Now and wait for the procedure to finish. Defragmenting a large

hard drive can take hours, so often it is best to do this before going to bed.

**Problem:** You've defragged the hard drive and installed the latest drivers, and Office 2007 still runs slowly.

**Solution:** Consider upgrading your RAM. Your system memory has the greatest impact of any hardware component when it comes to running Office—and practically every other program. Upgrading your CPU also is an option, but it is expensive, difficult, and usually requires a motherboard upgrade, as well.

RAM adds the biggest bang for the buck, as it costs pennies per megabyte, depending on the type you need. Adding more memory lets you run more programs simultaneously, keep more windows open simultaneously, and work with larger files. Check with your computer manufacturer to find out the fastest type of memory that works in your system and also the maximum amount of memory the computer will accept. Buy as much as you can afford or as much as the system can handle, whichever comes first.

**Problem:** Office application windows seem to take forever to minimize and maximize, and there is a lot of video corruption when you drag windows across the screen.

**Solution:** Most people think fast video cards benefit only gamers or people who use a lot of 3D apps, but upgrading to a video card with good 2D acceleration and more video RAM can make Office fly. Windows will open more quickly, you'll notice fewer visual anomalies when dragging windows, and a good video card can even make text and images look crisper. When shopping for a video card, look for one with at least 128MB of memory (256MB or more is preferable) that uses the fastest interface your computer supports (PCI [Peripheral Component Interconnect], AGP [Accelerated Graphics Port], or PCI-E [PCI-Express]). ■

BY TRACY BAKER

# How To Install A Wireless Network

**F**reedom is the name of the game when it comes to computing today. Much of that freedom can be attributed directly to wireless networks, which allow consumers to use their desktop and laptop PCs wherever they like around their homes.

Over the years, wireless hardware hasn't changed much from its original formula, but device manufacturers have eased the process of installing and configuring a wireless network. Still, you'll need a solid working knowledge of wireless concepts and designs before you embark on your own wireless project to ensure that the final result is efficient and secure. Although wireless networks usually cost a little more than their wired counterparts, they offer far more mobility without a huge decrease in performance or reliability.

## About The Basics

At its core, a wireless network is amazingly simple, containing two essential components: a wireless access point and a wireless network adapter (or adapters, depending on the number of computers connecting to the network). The wireless access point uses antennas to emit data signals to wireless adapters that are connected to

desktop or laptop PCs. These wireless signals take the place of Ethernet cables to send data, allowing users to connect to the network without physical limitations.

Access points provide all of the basic functions and wireless security features necessary for a simple wireless network if you already have an existing wired network using a broadband router. However, if this is the first network in your home, or if you want to build a completely wireless network, a wireless router is the better choice. A wireless router, unlike an access point, has the ability to function as a firewall, which can help prevent malicious attacks on your network.

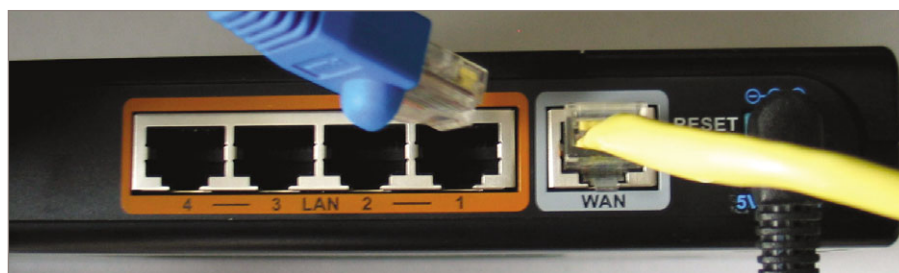
To connect the wireless router or access point, the computers on your network will each need a wireless adapter. These adapters are similar to standard NICs (network interface cards), but they include technology (including antennas) to receive wireless signals from the network. Wireless adapters for desktop computers take the form of PCI (Peripheral Component Interconnect) expansion cards or USB adapters. Either option can require software installation before or after the hardware installation. For the USB hardware installation, simply plug the USB adapter



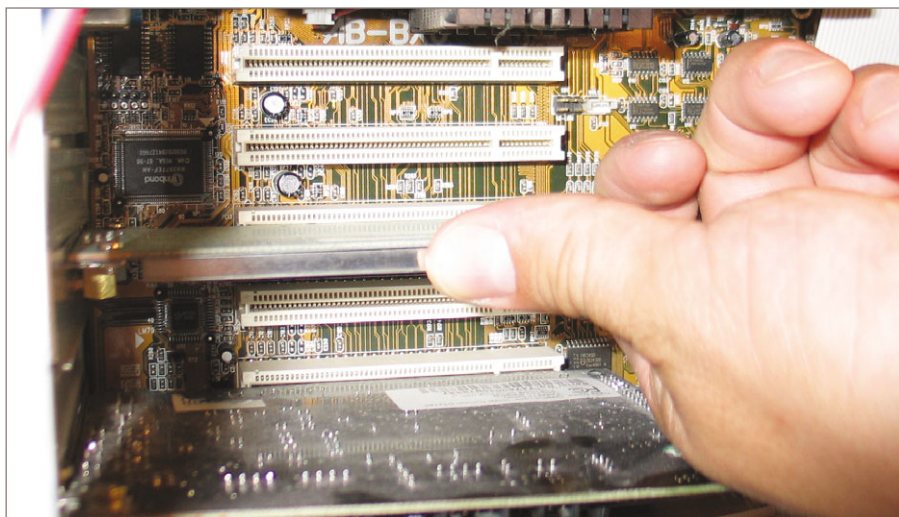
into an open USB port. PCI adapters are installed in the same fashion that any other PCI extension card (such as a video card or sound card) is installed. Notebooks can use USB or PCMCIA (Personal Computer Memory Card International Association) adapters, but most newer notebooks include built-in wireless technology, so no separate adapter is necessary.

Most wireless routers (and access points) include similar features, so it's best to find one with a good reputation that also fits in your budget. If you need to buy a wireless adapter, check that the adapter's requirements are compatible with your computer. Further, while you can usually mix and match wireless adapters with wireless routers and access points, it can be easier to buy all the hardware from the same manufacturer to avoid configuration problems. Another potential benefit of buying from the same manufacturer is that some routers and adapters feature proprietary speed boosters and other features that work only with paired equipment.

A final, and important, purchasing note: Wireless networking equipment uses varied wireless standards, such as 802.11b, 802.11g, and 802.11n. Devices using these standards vary in price, performance, and compatibility. Devices using the popular 802.11g standard are typically a safe bet, both for performance and cost reasons. Although you'll enjoy faster performance with the



To perform the initial configuration of your wireless network, you'll need to connect an Ethernet cable between the wireless router and your primary computer, as well as a cable connecting your broadband modem and the router.



newer 802.11n standard, you'll pay more for 802.11n devices. There are other tradeoffs, however. When used in 5GHz mode, 802.11n devices are less apt to receive interference from other household devices, while 802.11g devices feature better wireless range (unless an 802.11n device is used in 2.4GHz mode, which negates 802.11g's higher performance advantage).

## Getting Started

For the purposes of this article, we will assume you're using a wireless router to build an entirely wireless network, rather than adding a wireless access point to an existing wired network. If you do decide to use an access point with an existing wired broadband router, the following information is still valuable, because you'll need to follow many of the same steps to configure your access point.

Because a wireless router is the device that sends the wireless signals—including Internet access—to other computers on your network, its placement within your home can be crucial. If the router is stationed in an obscure corner of the home, it might be difficult to obtain reliable connectivity throughout your home. Therefore, it's generally best to choose a central location for the router. Not all users have the option to choose their location, because if the network is paired with a broadband

Internet connection, the router will need to be connected by cable to the broadband modem, and there might be limited cable outlets in the home.

Also, be aware that the closer a wireless router is to external walls, the more easily its signals can be detected by someone outside your home. Although your wireless security configuration will protect you from wireless hackers, it doesn't hurt to place the wireless router toward a central location to weaken the signal that leaks outside of your home. If the initial location doesn't provide solid coverage throughout your home, try other spots or consider using more

To connect a desktop PC to your wireless network, you can use either a wireless USB adapter or an internal PCI card (seen here), which generally does a better job of receiving wireless signals than its USB counterparts.

powerful wireless antennas on your equipment or a wireless signal booster.

## Configuration Time

Configuring your wireless network is a fairly straightforward process, but there are important steps throughout that ensure that your network will run as designed and that it is safe from attacks. For this configuration, it's necessary to connect your primary computer to the router using an Ethernet cable, but you'll be able to connect to the router wirelessly afterwards with any computer that has a wireless adapter (or built-in wireless capability), including this primary computer.

First, shut down the computer that's connected to your broadband modem and then turn off the modem (if it doesn't have a Power button on its rear or front panel, unplug it from the power outlet). Find the Ethernet cable (this is usually blue in color, but sometimes yellow, red, or black) that's connected to the rear panel of the modem

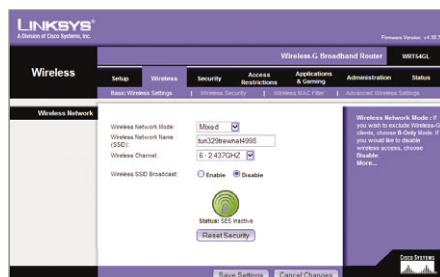
## Wireless Puzzle

**B**efore installing a wireless network, you'll need to determine if any of your computers or mobile devices already have wireless technology and, if they do, which wireless standards they support. If none of your computers have wireless capabilities, you'll still need to know which wireless standards are compatible with each other so you don't buy incompatible products. ■

	802.11n adapter	802.11g adapter	802.11b adapter	802.11a adapter	Bluetooth device
802.11n router	✓	✓	✓	✓	✗
802.11g router	✓	✓	✓	✗	✗
802.11b router	✓	✓	✓	✗	✗
802.11a router	✓	✗	✗	✓	✗
Bluetooth receiver	✗	✗	✗	✗	✓

✓ = Compatible  
✗ = Not compatible





Always choose an SSID (your wireless network name) that's difficult to guess and doesn't contain any personal information. You can also disable your router's SSID broadcast to help hide the network from outside eyes.

and disconnect the end that's attached to your PC. Attach this end to the WAN (wide-area network) port on the wireless router. Next, connect another Ethernet cable to the Ethernet port on the rear panel of your computer and connect the other end to a numbered port on the rear panel of the router.

Power on your modem, wait a bit for it to initialize, and then connect the router's power adapter to its rear panel and plug it in. Turn on your computer and take a look at the lights on the router's front panel. In addition to the power and WLAN (wireless local-area network) lights, you should see a light that represents the LAN port to which you connected the computer. For example, if you plugged the Ethernet cord into port one, the light above "1" may be on. The interfaces for routers can vary, so check your router's manual if you're not sure what to look for. If no lights are on, or the expected light is not on, check all of your cable connections.

The next step will vary depending on your device, but you'll need to either install the software included with your wireless router or enter an IP (Internet Protocol) address in your browser that will direct you to the router's configuration page. Each of these options should walk you through the process of setting an administration password to access the router's configuration settings, selecting your Internet connection type, and inputting your username and password for your Internet connection.

During this phase, you'll also need to create an SSID (Service Set Identifier) for your network. This essentially gives your network a name. Choose the name with care, because an easily guessable name can make your network more susceptible to attack. Don't use your name or other personal info and don't use a name that could entice outsiders. Create a long SSID that includes letters and numbers and try to change your SSID about every three months.

Finally, configure the security for your wireless network. Again, your router will likely include a wizard that walks you through the process. Regardless of what the wizard defaults to, you should select the strongest security option. If your router (and the computers connecting to it) have WPA (Wi-Fi Protected Access) support, use that. If not, use the strongest available WEP (Wired Equivalent Privacy) option.

### Wireless Success

After your wireless router is installed and configured, you're almost finished.

Now you need to install (if you haven't) or configure the wireless adapters on your computers or mobile devices. If your notebook or mobile device has built-in wireless, use the included wireless utility to connect to the network. (You'll need to input the SSID and security passphrase or WEP encryption key.)

If you're connecting with a computer that doesn't include built-in wireless, you can connect to the network using the USB or PCI adapter that you have installed. After installation, the device's software (or Windows' wireless connection utility) can be used to input the SSID and security information.

At this point, your wireless network is complete. Although the typical installation is trouble-free, it's possible you can encounter trouble with flaky network adapters. If you're unable to connect a computer to your network, make sure the adapter is securely attached to the computer and that you're using the correct passphrase or encryption key. ■

BY CHRISTIAN PERRY

## Battling Interference

For all of their conveniences, wireless networks can suffer from interference. Cordless phones, wireless game controllers, fluorescent lights, microwave ovens, Bluetooth devices, cordless headsets, and even the neighbor's wireless network can all interfere with your wireless network.

This interference occurs when devices emit signals into the same frequency that your network uses. For example, many cordless phones use the same 2.4GHz band used by 802.11b and 802.11g networks. Even 802.11n devices, which use the 5GHz band, aren't immune to interference, because some cordless phones, radar, and satellites also use this band.

To help decrease interference, don't place your wireless router near the aforementioned devices, and if you suspect you're receiving interference from a network outside of your home, try moving your router to a more central point inside your home. You can also try changing the Wi-Fi channel on your wireless devices, which can help to avoid interference from in-home devices. Finally, angling the antennas on your routers or wireless adapters can help to ensure better reception.

If you're in the market for a new cordless phone, buy a phone that uses a frequency different from your network's frequency. Better yet, consider buying a phone that uses DECT 6.0 (Digital Enhanced Cordless Telecommunications), a new protocol that's designed to avoid interference with other wireless networks. As an added bonus, DECT 6.0 features improved voice quality, range, and security over other cordless phone technologies. ■

# EXAMINING ERRORS

COMPILED BY THE SMART COMPUTING STAFF

**Error:** Error 25090. Office Setup encountered a problem with the Office Source Engine, system error: 2147023836. Please open SETUP.CHM and look for "Office Source Engine" for information on how to resolve this problem.

**Translation:** You could receive this Office error message if all of the following conditions are true: You have two copies of Office installed on the same computer; both copies were installed with the All Users

parameter; both users who installed Office failed to remove files locally copied when Setup was finished; and one of the two copies of Office 2007 was removed.



**Solution:** Put the Office CD into your optical drive, and if the Setup program doesn't start automatically, find the Setup.exe file on the CD and double-click it to launch Startup manually. Once the Setup window pops up, you can cancel the setup (the error should be corrected simply by launching Setup) and then respond to the prompts, which will quit the setup process. For more information regarding this error, visit support.microsoft.com/kb/827467. ■

**Error:** Could not perform this operation because the default mail client is not properly installed.

**Translation:** This error message may appear if you use Outlook Express as your default email client and select the Mailto link from a Web page in Internet Explorer. According to Microsoft, the error can occur because the number of characters in the list of email recipients is greater than 465.

**Solution:** To work around this issue, you can copy the list of email recipients from the source code in Internet Explorer to Outlook Express. Open up the Web page with the Mailto link, click the View menu, and select Source. In the HTML (Hypertext Markup Language) source code, locate the list of email recipients, which may be similar to: <A HREF="mailto:someone

@somewhere.net, anyone@anywhere.net">visible text</A>. Select the email addresses, choose the Edit menu, and click Copy. Open Outlook Express and click Compose Message, click the To field, select the Edit menu, and choose Paste. You should be able to email all of the listed recipients. For more information, see: support.microsoft.com/kb/q182985. ■

**Error:** Another installer is currently running. Please wait for it to complete and then try to install the product again.

**Translation:** You may see this error message when attempting to uninstall a previous version of a Symantec Norton product, such as Norton Antivirus, with the intent of installing a newer version of the same program.

**Solution:** Symantec advises that you first visit [tinyurl.com/5edprv](http://tinyurl.com/5edprv) and print the pages shown, which contain specific instructions, for reference purposes. After printing the pages, Symantec instructs you to exit all running programs and restart the computer. To reinstall your Norton product, follow the specific instructions at [tinyurl.com/5edprv](http://tinyurl.com/5edprv) that best match your scenario. These scenarios include:

- I Have The Product On A CD

- I Downloaded The Product From The Symantec Store And Still Have The Installation File
- I Downloaded The Product From The Symantec Store And No Longer Have The Installation File
- The Product Came Pre-installed On My Computer
- I Downloaded The Product From My Internet Service Provider (ISP)

If reinstalling the Symantec program still doesn't work using the instructions that fit your situation, Symantec suggests that you use the Norton Removal Tool, which is designed to completely

remove Norton products. It will remove 2003 through 2009 editions, as well as Norton 360. Symantec also instructs users with ACT! or WinFAX to back up those databases before using the Norton Removal Tool. When using the Norton Removal Tool, Symantec states that you may need the product key that came with the Norton software if you attempt to reinstall it. Depending on the specific Norton product you're trying to uninstall, the steps for using the Norton Removal Tool vary slightly. The steps for each product are available at [tinyurl.com/6prhgo](http://tinyurl.com/6prhgo). ■



**Error:** The folder iTunes is on a locked disk or you do not have write permissions for this folder. The folder iTunes cannot be found or created and is required. The default location for this folder is inside the Music folder.

**Translation:** According to Apple, this error may occur when installing or opening iTunes in Windows XP. It can occur if your My Music folder is not in the correct location, or if it is not listed correctly in the Windows Registry.

**Solution:** First, check to be sure your My Music folder



is in the default location (C:\DOCUMENTS AND SETTINGS\<USER-NAME>\MY DOCUMENTS\MY MUSIC). If your My Music folder is not located there, Apple suggests that you create a new music folder in that location.

Next, go to [tinyurl.com/2meyw](http://tinyurl.com/2meyw). This will lead you to a page where you can download Tweak UI from Microsoft PowerToys. Click the TweakUI.exe link in the column on the right side of the page and choose to save the file to your computer. After the

download is complete, double-click the file to launch it and install Tweak UI. This download is only for Windows XP users. After you install Tweak UI, go to the Start menu and open the Tweak UI application. Click the plus sign (+) adjacent to My Computer in the left column and then choose Special Folders. Select My Music from the drop-down list on the right side of the window. Click the Change Location button. If you see a warning message, click Yes. Locate the My Music folder and then click OK. Reinstall (or open) iTunes. To see Apple's resolution for this error message, visit [support.apple.com/kb/HT1866](http://support.apple.com/kb/HT1866). ■

**Error:** Error loading: C:\PROGRA~1\Mywebs~1\bar\1.bin\M3PLUGIN.DLL. The specified module could not be found.

**Translation:** You may see this message each time you boot up your PC if you have the MyWebSearch Toolbar. Typically, the toolbar is bundled with a downloaded application or file. Although the MyWebSearch Toolbar allows you to search multiple online search engines, the browser tool also tracks the Web sites you visit to

deliver targeted advertisements to your PC. The error may occur after you run an antivirus or antispyware software scan or after you remove the application or file that installed MyWebSearch Toolbar.

**Solution:** Unlike most spyware tools, the MyWebSearch Toolbar is removable from Add Or Remove Programs. In Windows XP, click the Start menu, select Control Panel, and choose Add Or Remove Programs (in Classic view). In Vista, click Start,

Control Panel, and Uninstall A Program (under Programs). Often, the MyWebSearch Toolbar is listed as My Search, My Way, or My Web in the Add Or Remove Programs dialog box. Select a listing that corresponds with the MyWebSearch Toolbar and click the Remove (Uninstall/Change in Vista) button to uninstall the application. Next, we suggest you run anti-spyware software to remove any other spyware or adware that may be on your computer. ■

**Error:** Could not load an object because it is not available on this machine.

**Translation:** According to Microsoft, this error can occur when you attempt to open an item in Microsoft Outlook 97. It refers to an ActiveX control, or a small application that adds additional functionality or interactivity to another application, such as a Web browser or, in this case, Microsoft Outlook. The error occurs because the file you're trying to open is looking for a component of the ActiveX control on your PC but can't find that component. This error commonly occurs

when opening an item created on a different PC. Typically, clicking OK on the error message gets rid of the error and proceeds to open the item.

**Solution:** Microsoft offers two methods for dealing with this error. The first is really just a bypass. Simply click OK to dismiss the error message and continue working with the item. The second solution involves making sure the ActiveX controls on the PC that created the document are the same as those on the destination PC. You can



start by contacting the author of the document and determining which ActiveX control to install on your PC and then installing it. Another way around the problem is to simply recreate the item. If it's a

document or spreadsheet, simply copy and paste its contents into a new document or spreadsheet and then save it as the appropriate file type for use with the destination PC. To see Microsoft's suggested fix for this error message, visit [support.microsoft.com/kb/166369](http://support.microsoft.com/kb/166369). ■

Have questions about an error message you've seen? Send us your message ([errormessages@smartcomputing.com](mailto:errormessages@smartcomputing.com)), and we'll try to decipher it. Tell us what version of Windows you're using, give the full text of the error message, and provide as many details in your explanation as possible. Volume prohibits individual replies.



# FAST FIXES

## Update For CyberLink's PowerDVD 8 Ultra

**Problem:** The previous version of PowerDVD 8 Ultra did not offer support for HDMI (High-Definition Multimedia Interface) repeaters (devices that allow you to significantly extend your HDMI signal without losing quality of picture or sound).

**Solution:** To equip your retail version of PowerDVD 8 Ultra with HDMI Repeater support, download the PowerDVD 8 Ultra build 2021a update. Go to [www.cyberlink.com](http://www.cyberlink.com) and click Support. From the drop-down menu, choose Software Updates. The resulting page lists all of CyberLink's products. Locate PowerDVD (it should be first on the list) and click the corresponding red arrow in the Updates column. Click the Download button next to PowerDVD 8 Ultra Updates, dated Sept. 24, 2008. A dialog box appears asking you to save the file. Save the file to your hard drive and, once the download is complete, locate the file and double-click it. Follow the on-screen directions to set up your installation preferences. When the installation is complete, restart your computer.

[www.cyberlink.com](http://www.cyberlink.com)

## Update For Microsoft Outlook 2003

**Problem:** Holidays are not provided for the Microsoft Office Outlook 2003 calendar for the years 2007 through 2012.

**Solution:** In order for your Outlook calendar to list holidays for 2007 through 2012, you must download an update. Go to [www.microsoft.com/downloads](http://www.microsoft.com/downloads) and type **KB924423** into the Download Center search field. On the resulting page, choose Update For Outlook 2003 (KB924423) from the list. On the next page, review the Quick Details information or find more in-depth information about the download by clicking the Knowledge Base article link. When you're ready to download,

click Download in the blue box. Save the file to your hard drive. When the file is downloaded, locate and double-click it to begin the installation. Follow the directions to complete the installation, and then restart your computer.

[www.microsoft.com](http://www.microsoft.com)

## Firmware Upgrade For Plextor's PX-B900A BD DVD±R/RW Disc Drive

**Problem:** The PX-B900A disc drive lacks sufficient performance for DVD DL (dual-layer) media and support for ATA-7 (Advanced Technology Attachment—a standard attachment interface for disc drives) on Vista computers.

**Solution:** To increase the performance of your Plextor disc drive and to ensure ATA-7 support on your Vista machine, download a firmware upgrade from Plextor. Go to [www.plextor.com](http://www.plextor.com) (you may have to choose a country) and click the Support link at the top of the page. On the resulting page, click Downloads and then Firmware Upgrades. Locate and click Plextor PX-B900A BD DVD±R/RW Firmware Upgrades. On the next page, click Download (File Size: 1102KB) and save the file to your hard drive. When the download is complete, navigate to the file and double-click it to begin the installation. Follow the on-screen directions to fully install the upgrade, and then restart your computer.

[www.plextor.com](http://www.plextor.com)

## Security Update For Office 2007

**Problem:** A security vulnerability in Microsoft Office system 2007 could allow arbitrary code to run when you open a maliciously modified file.

**Solution:** To ensure the security of your Windows machine running Microsoft Office 2007, download an 8.7MB update. Go to [www.microsoft.com/downloads](http://www.microsoft.com/downloads), type **KB954326** in the search field, and click Go. On the

Results page, choose Security Update For Office 2007 (KB954326). On the next page, review the info about the download and then click Download, found in the blue box. Save the file to an easily-accessible location on your hard drive. When the download is complete, locate the file and double-click it to begin the installation. Follow any on-screen directions and complete the installation. Restart your computer.

[www.microsoft.com](http://www.microsoft.com)

## FIX OF THE MONTH

### Firmware Update For Sony's DSLR-A700 Camera

**Problem:** The A700's Access Lamp stays lit and then the camera stops responding after pictures are taken in rapid succession; powering off the camera while it is in "MR" mode causes settings to transfer to other modes; and pictures taken at an ISO of 3200 contain excess noise.

**Solution:** Download a firmware update. Go to [www.esupport.sony.com](http://www.esupport.sony.com) and hover your cursor over Cameras And Camcorders. Choose Cameras and A (Alpha) Digital Cameras. On the next page, choose Drivers/Software Updates. Next, use the drop-down menus under the Select It option to choose the DSLR-A700 camera. Click Continue. Under Download Files on the next page, choose your operating system to view available updates. Click the Firmware link to expand the list. Choose DSLR-A700 Camera Firmware Update and then click Download Now. Save the file to your hard drive and wait for the download to complete. Next, locate the file on your hard drive and double-click it to begin installation. Follow the prompts to install the update and then restart your computer.

[www.sony.com](http://www.sony.com)

# Q & A

*Need help with your hardware or software? Looking for simple explanations on technical subjects? Send us your questions!*

Get straight answers to your technical questions from *Smart Computing*. Send your questions, along with a phone and/or fax number, so we can call you if necessary, to: *Smart Computing* Q&A, P.O. Box 85380, Lincoln, NE 68501, or email us at [q&a@smartcomputing.com](mailto:q&a@smartcomputing.com). Please include all version numbers for the software about which you're inquiring, operating system information, and any relevant information about your system. (Volume prohibits individual replies.)



## Online

**Q** I have an HP Pavilion a6530f using Windows Vista. My Juno service seems OK, but my Gmail, Windows Live Hotmail, and Crawler email have said they can't function without JavaScript, which they say this computer doesn't have. I must have done something to deactivate JavaScript, but I can't come up with a solution.

**A** JavaScript is the glue that provides much of the functionality you'll find on

popular Web sites such as Gmail. The most likely culprit is that JavaScript has been inadvertently disabled in Internet Explorer. To re-enable JavaScript in IE7, click Start, select Internet Explorer, and when it opens, click the Tools menu. Select Internet Options, click the Security tab, and click the Custom Level button. Next, scroll down until you find Active Scripting. Select Enable and click OK, confirm by clicking Yes, and then click OK again. Finally, relaunch Internet Explorer.



## Peripherals

**Q** I have an older HP LaserJet 2200 printer. It has been very good to me. Lately it has started to leave extra toner imprinted on the border of one side and repeats images it has printed from the original spot in the same line but farther down the page. I have used the cleaner function, but it is not getting much better. Can I fix it, or is it worth going to the repair shop?

**A** Toner streaks often occur when the toner cartridge is low or defective. If the toner cartridge in your LaserJet isn't new, try swapping it out for a new cartridge. HP sells the HP-96A (C4096A) cartridge online at [www.hp.com](http://www.hp.com) for \$103.99. If the cartridge is fairly new and hasn't been used for a significant number of print jobs, your printer's fuser might need to be replaced.

LaserJet printers are pretty clever devices. A rotating drum inside the printer holds an electrostatic charged coating. When you print a page, a laser creates an image of this page on this electrostatic coating. Next a patina of fine powder (toner) is attracted to the remaining electrostatic charge on the drum.

As this image is created on the drum, a sheet of paper is given a negative charge so that it can attract the toner. Once this toner has been deposited on the paper, it needs to

be permanently affixed to the paper. This is where the fuser fits into the picture. The fuser is simply a heated roller that fuses the toner particles into the paper itself.

Sometimes the fuser will get a buildup of toner in one area; this may be due to a jam that didn't let the fuser advance the paper properly, or it may be that the fuser has just become too worn to function properly.

Replacing a fuser can be expensive. HP has discontinued the LaserJet 2200, but you can still purchase both new and rebuilt fuser kits from a variety of Web sites. You may be able to purchase fusing assembly parts at the HP Part Store ([tinyurl.com/b5ldn](http://tinyurl.com/b5ldn)) depending on your specific model number. Using this tool, you'll also be able to find the specific part number in case you'd like to shop elsewhere. Prices vary from \$100 to over \$300 for this kit. Replacing the fuser is fairly easy and doesn't require any special tools.

However, it's hard for us to recommend replacing the fuser without knowing more information about how long you've had the printer and how you use it. If your printer is more than a few years old or has been used extensively, other components might need to be replaced in the near future. Printers are usually rated for a specific number of

printed pages, and all the user-replaceable components (mainly the fuser and drum assembly) are designed to function up to this life span.

Compounding your decision is the steadily dropping price for laser printers. Instead of remaining the premium peripheral

marketed primarily to businesses, laser printers have become affordable for home users, as well. Color laser printers can be purchased for less than \$500, and a black-and-white LaserJet roughly comparable to your 2200 can be purchased for less than \$250.



## Hardware

**Q** I've been looking for an affordable notebook computer and have become interested in the Asus Eee PC and the MSI Wind. Are these good bargains?

**A** The Eee PC ([usa.asus.com](http://usa.asus.com)) and MSI Wind ([www.msimobile.com](http://www.msimobile.com)) are the vanguard of a new class of portable computers often dubbed "netbooks." Netbooks originally were designed around three primary concepts: ultra-portability, affordability, and online connectivity and functionality.

What makes these computers different from a Dell or HP notebook? Size is the first thing you'll notice. For instance, the Eee PC 901 has an 8.9-inch screen and weighs in at less than 2.5 pounds. The MSI Wind U100 series has a larger screen at 10 inches, but both are dramatically smaller than the average notebook that has a 14- to 15-inch screen. Reducing the screen size helps lower the overall weight and makes it easier to tuck the netbook into a typical backpack or briefcase. For travelers trying to reduce the weight they have to carry around airports, netbooks can be a godsend.

Netbooks are also intended to be cheaper than full-sized notebooks. There are versions of both the Eee PC and the Wind that retail for less than \$500, though initially both were aiming for \$199 list prices. Discount prices don't necessarily mean discount components, however. Although netbooks generally have less system resources than their larger brethren, you can configure them with up to 160GB hard drives and 1GB of memory. Both Asus and MSI offer models with Intel's new Atom CPU running at 1.6GHz and Wi-Fi, Bluetooth, and Ethernet connectivity. One area where the inevitable compromises are apparent is in video performance. Both the

Eee PC and the Wind use an integrated graphics adapter that is fine for routine use, but will probably leave hardcore gamers wondering "Where's the beef?"

Although the low prices were the initial attractions of the Eee PC and Wind, the burgeoning Web 2.0 world made the performance compromises acceptable. By using online applications such as Google's Gmail and Apps, the speed of your Internet connection became more important than the speed of your processor. Using online applications also meant that a big hard drive wasn't important. If Facebook, email, instant messaging, and other social networking applications play an important role in your computing "life," a netbook might be a perfectly acceptable computer.

Since their introduction, both the Eee PC and the Wind have attracted fanatical followings. And other computer manufacturers have noticed this attention and responded by releasing their own netbooks; Dell has introduced the Inspiron Mini 9 (with Ubuntu Linux) for \$349, and HP has followed suit with the Mini 1000 series (with Windows XP) starting at \$399.99.

Although netbooks offer a lot of value, they aren't for everyone. Compared to full-sized notebooks, they're underpowered. If you're a "power user" who frequently uses a CPU-intensive application, you'll want to skip the netbooks. Netbooks also lack high-powered graphics cards and typically trail full-sized notebooks in storage capacity. Some users also dislike the smaller keyboards that netbooks utilize. Our recommendation is to try one out before you buy one to see if you can live with their inherent compromises, and see how well the online lifestyle fits your computer usage.



# Frequently Asked Questions

Answers to users' most common questions about 802.11n

You can get the most range by minimizing interference and physical obstacles between your wireless points.

**FAQ** I see all kinds of range specifications for wireless devices. What is the maximum practical range for 802.11n, and how I can get the most range?

Wireless range is difficult to define because it is influenced by various factors. The big variable is data rate. For example, it's possible to extend the range by lowering the data rate. Data rates and effective ranges are also impacted by electrical and physical interference to the wireless radio signal. This includes interference from wireless telephones operating in the 2.4GHz or 5GHz frequencies used by different 802.11 standards, along with physical interference, such as walls, floors, windows, and other obstructions between the wireless NIC (network interface card) and the wireless access point. Even manufacturers don't list absolute ranges. Instead, they note maximum ranges that the devices are theoretically capable of reaching.

From a more practical standpoint, 802.11n should easily provide wireless coverage at excellent data rates (about 250Mbps [megabits per second] or more) throughout your entire house—though it's usually a good idea to locate the wireless router centrally in the house. Outside, you'll find that you can probably maintain your 802.11n connection to a range of about 200 meters or more. Just remember that the signal strength and the resulting data speeds will fall off as you move farther away.

You can get the most range by minimizing interference and physical obstacles between your wireless points. If you use cordless phones, be sure that the phone operates outside of the 2.4GHz and 5GHz frequencies used by 802.11n. (Devices that support the 802.11n standard usually rely solely on the 2.4GHz band, but some dual-band devices also support the 5GHz band.) The use of high-gain or directional antennas can also help maximize wireless range, but they will add cost to your wireless setup.

**FAQ** Why are there multiple antennas with 802.11n devices? Are the small USB 802.11n adapters with no external antennas just as good as the internal NIC with three big antennas?

One of the big benefits to 802.11n is its use of multiple simultaneous communication channels, which breaks the data stream into multiple parts and transmits each part across a different antenna to corresponding antennas on the receiving end. The technique is called MIMO (Multiple Input/Multiple Output).

All types of 802.11n NIC devices use multiple antennas. Just because you don't see multiple antennas doesn't mean they're not there. For example, the SMC SMCWUSBS-N 802.11n wireless USB adapter uses two internal antennas. The 802.11n standard should allow up to four antennas, but most devices use two or three. This reduces the effectiveness of MIMO slightly, but USB and PC Card NICs should provide just as much throughput as PCI NICs with full-sized antennas at close range.

**FAQ** Will encryption such as WPA (Wi-Fi Protected Access) reduce the performance of my 802.11n connection?

Yes, wireless encryption can slow the net data throughput of your wireless connection, but the impact should be only slight and not even noticeable unless you're comparing detailed throughput measurements. Encryption is a mathematical process that has to be applied to data before it's transmitted and then again once the data is received. A well-designed encryption feature can achieve this at nearly **line rate** (the rate of full-speed unencrypted data). But in actual practice, the encryption causes just a little latency, slightly slowing the data transfer. For most users, the benefit of wireless encryption far outweighs the slight performance penalty. ■

Are you having trouble finding a product or getting adequate service from a manufacturer? If so, we want to help solve your problem. Send us a description of the product you're seeking or the problem you're having with customer service. In billing disputes, include relevant information (such as account numbers or screen names for online services) and photocopies of checks. Include your phone number in case we need to contact you.

Letters may be edited for length and clarity; volume prohibits individual replies.



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## HP Ships An AC Adapter Cord & Symantec Reissues A Refund Check

*At the end of August 2008, I bought an HP Pavilion dv6700t notebook from [www.hp.com](http://www.hp.com). It arrived as promised and worked great, except that the computer would shut down after some time, even though the AC adapter was plugged in properly. Frequently, I would plug it in, but the laptop wouldn't charge. I chatted online with an HP tech, and she diagnosed it as a loose AC adapter port and said that I should send my computer to HP to have it fixed. I sent in the computer and waited. I was told I could check the status of my order online, and when I did, I saw that HP had determined my computer was out of warranty and said it would cost \$318.87 to fix. When I called, I was told that it was determined to be customer damage. When I balked at that, I was told that a manager would call me the next day. When I talked with the manager, he said I could either pay the fee or talk to someone else at HP Resolutions. I talked to several people and was told my computer would be returned to me without the repair being done. I feel that I am getting nowhere. I have had my computer about a month. Can you help?*

**Doug Williams**  
**Ottawa, Ill.**  
.....

When we talked with Doug to ask if he had any updates regarding the situation, he told us that he received his laptop from HP with a note that said no trouble was found and that the notebook was in warranty. We shared Doug's experience with our HP contact, and he, in turn, passed the information to a member of HP customer support. The customer support representative contacted us on Oct. 14 and stated that Doug would receive a phone call that evening to work out the issue. We talked with Doug the next day, and he said that HP would send him a new AC adapter to see if that was the problem. If

the problem persisted, HP would send him a new computer. When we followed up with Doug on Oct. 20, he had received the AC adapter cord, and his notebook was running without error.

*I have been a longtime user of Norton antivirus products. I purchased Norton 360 and asked Symantec if the time remaining on my prior subscription to Norton Internet Security could be applied to my new purchase. This was refused by phone. I reluctantly accepted this response but requested that the automatic renewal to Norton Internet Security be stopped. I was assured that this was done. Nevertheless, \$49.95 was later applied to my credit card for the renewal of Norton Internet Security. Numerous phone calls and emails for a refund finally wore me out. The process included my having to send Symantec a copy of my credit card bill, and the last I heard (six months ago), I would get a check in about a month—nothing came.*

**Stewart**  
**Moraga, Calif.**  
.....

We emailed Stewart on Oct. 14 to inquire about any developments in his issue with Symantec. Stewart responded that he had still not received the check he was promised. Accordingly, on Oct. 17 we emailed our contact at Symantec and shared Stewart's issue. We were told that there is a separate group that handles issues like Stewart's and that he would forward our email to the correct person. We were promised a phone call from a Symantec representative to work out the details but did not receive the call. After several days, we emailed another contact and explained the issue. Our contact delivered our issue to her escalations team and told us that Stewart's check was reissued on Oct. 22 and will reach him in four to six weeks. ■

# Just A Little To The Left

**W**e moved into a new house five months ago, which of course means that we're only now getting pictures up, unpacking all the books, and making sure the décor is arranged just so. Sometimes you have to take care of bigger things first, like phone jacks and sewer lines, but that doesn't negate the importance of getting organized. Your computer is the same way. Lots of people create headaches for themselves by not taking care of the little things. If you organize your screen for better efficiency and less confusion, you'll get more done with fewer problems.

Let's start with the Desktop. Few things grate my nerves like a Windows Desktop with dozens of icons spread all over the place. There's rarely any rhyme or reason to the placement of Desktop icons, and a big mess risks more than wasted time. It also encourages confusion and forgetfulness. You're more apt to delete the wrong thing out of a big jumbled pile, and you're less likely to remember to back up your Desktop than My Documents. Finally, when you're saving different versions of files in several places, you're a lot more likely to overwrite the wrong version or leave an important change in a neglected copy. You're simply inviting trouble by using the Desktop as anything but very temporary storage.

It's not hard to stay disciplined about using My Documents and organizing your files into well-labeled folders. The extra seconds and clicks spent saving or retrieving pay off handsomely in time and effort saved by not hunting around or recovering from mistakes. If you're still concerned about getting to your frequently used files quickly, use both the Quick Launch toolbar (see my next suggestion) and the "recently opened" option found in the File menu of almost any software. If you insist on using the Desktop for file storage, check out the sort options available by right-clicking an empty part of the Desktop and selecting the Arrange Icons By (View and Sort By in Vista) options. If nothing else, spare your mother some consternation about raising a slob. Rearrange and clear out old Desktop items every once in awhile.

On the other hand, one thing that very much belongs on a well-organized screen is the Windows Quick Launch

toolbar. You can always navigate the All Programs menu for applications, but I like having icons a click away for my 10 or 12 go-to programs such as Outlook, Excel, iTunes, and Notepad. Just right-click an empty place on the Windows Taskbar, expand the Toolbars menu, and select Quick Launch. In WinXP, you may have to unlock the Taskbar (right-click in an open area and deselect Lock The Taskbar). Right-click each icon you want to remove and select Delete. Then, create Desktop shortcuts for the programs you want to add. Find each one in the All Programs menu, right-click

it, and select Send To and Desktop (Create Shortcut). Then, drag that shortcut over to the Quick Launch toolbar. Don't forget to clean up that Desktop shortcut (see above). Now you're just one click away from each of your favorite applications. If you prefer using less screen real estate on these kinds of things, as I do, right-click an empty part of the Quick Launch toolbar and choose Small Icons from the View menu.

My last piece of screen advice can also be the most disorienting. It's also the most useful tweak I've ever found. Drag your Taskbar over to the right edge of the screen. (Again, you may have to unlock it first.)

There, doesn't that feel weird? You may have to adjust the width of the Taskbar or the height of the Quick Launch toolbar, but you'll find that the vertical layout lets you work with multiple applications much better than trying to lay each item out across the bottom of the screen. By the time you have four or five windows open, Taskbar items on the bottom become mostly unreadable. But you can stack 20 or more (trust me on this) on the right and still tell at a glance exactly which one is which. Even if you're not sold at first, keep it there for just a week and let me know if you still prefer it the old way. ■

BY GREGORY ANDERSON

Gregory Anderson is a regular contributor to *Smart Computing* and several other technology publications. He keeps a sharp eye (with the help of thick glasses) on computing trends and enjoys working with geeks of all stripes—most of the time. Share your re-decorating anecdotes at [gregory-anderson@smartcomputing.com](mailto:gregory-anderson@smartcomputing.com).







## 64GB USB Flash Voyager

\$199.99 | Corsair | [www.corsair.com](http://www.corsair.com)

Recently, I maxed out the small (30GB) hard drive on my laptop. I needed more storage, but it also had to be portable. Corsair recently launched the perfect solution to my storage dilemma: a 64GB flash drive. The 64GB USB Flash Voyager has enough capacity for a library of full-length movies and tens of thousands of high-resolution digital images. The drive's rubbery shell is cool, too. In fact, it makes the drive water resistant and rugged, so you can rest easy, knowing your data is safe from the elements. The Corsair 64GB USB Flash Voyager is also bootable, so you could store a full operating system and applications on the drive. Thanks to this drive, I've been able to clean up my laptop's hard drive without having to sacrifice easy access to any of my important files. ■

## Touch Diamond

\$549.99 | HTC & Sprint | [www.sprint.com](http://www.sprint.com)

The HTC Touch Diamond isn't your average Windows Mobile smartphone: This small, sleek device uses the latest TouchFLO 3D interface, which brings touch controls to many of the Windows Mobile functions we access most often, such as contacts, messages, and photos. With a flick, TouchFLO 3D enabled me to scroll through long lists. While testing the Touch Diamond, I was impressed with its 3.2MP

(megapixel) camera, which produced excellent images. Surfing with the Opera Web browser was terrific, as well, with powerful Web-browsing capabilities that let me browse sites as I would on a PC.

Browsing speeds were excellent, as well, thanks to the Touch Diamond's EVDO (Evolution Data Optimized) Rev. A and Wi-Fi support. ■



## V1

\$129.95 | BlueAnt | [www.myblueant.com](http://www.myblueant.com)

Bluetooth headsets are designed to help us keep our eyes on the road and our hands free. There's only one problem: Many times, we *have* to look at the phone to dial, see who is calling, and more. With BlueAnt's new V1 voice-controlled headset, however, this can change. The V1 lets you control the headset and many phone features simply by speaking commands. What's more, the V1 has special Voice Isolation Technology and dual microphones, so the people you call will hear you loud and clear. While testing the V1, my friends and family said they could hear me very well. Furthermore, I thought the headset was very comfortable to wear and easy to use. ■





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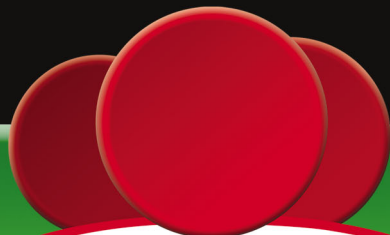


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